FEED THE FUTURE
The U.S. Government's Global Hunger & Food Security Initiative

Integrating Gender and Nutrition within Agricultural Extension Services

Liberia
Landscape Analysis

Working document May 2016

USAID
FROM THE AMERICAN PEOPLE

INGENAES
Integrating Gender and Nutrition within Agricultural Extension Services

Cover Photo: Musu Younn, the County Agricultural Coordinator (CAC) for Margibi County, stands in front of a Ministry of Agriculture (MOA) cassava demonstration. Photo by Austin Peterson, July, 2016.

This report was produced as part of the United States Agency for International Development (USAID) and US Government Feed the Future project "Integrating Gender and Nutrition within Extension and Advisory Services" (INGENAES).
www.ingenaes.illinois.edu

The author thanks the Liberian Ministry of Agriculture for assistance in developing this report with special thanks the Deputy Minister DRDRE, Thomas Gbokie, the Director of Extension, Edward Perry, and the Planning Officer for the Gender Office, Cleopatra Jallay, and to Caroline Nyaplue, Gender and Extension Faculty at the Cuttington University College of Agricultural Sciences.

Leader with Associates Cooperative Agreement No. AID-OAA-LA-14-00008.

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.

ILLINOIS
UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN
UCDAVIS
UNIVERSITY OF CALIFORNIA
UF UNIVERSITY of FLORIDA
cultural practice, LLC

Liberia
Landscape Analysis

Working document

First Edition published August 2016

Prepared by

Austin Alcorn Peterson

University of California, Davis

Acronyms

ARD	Agricultural Research and Development
CAADP	Comprehensive African Agriculture Development Program
CARI	Center for Agricultural Research Institute
CAC	County Agricultural Coordinators
CDC	Center for Disease Control and Prevention
CDCS	Country Development Cooperation Strategy
CSI	Coping Strategy Index
DAO	District Agricultural Officer
DO	Development Objectives
DRDRE	The Department of Regional Development, Research, and Extension
EPA	Environmental Protection Agency (Liberia)
FAO	Food and Agriculture Organization of the United Nations
FED	Food and Enterprise Development
FFP	Office of Food for Peace
g	gram(s)
GDP	Gross Domestic Product
GNI	Gross National Income
GOL	Government of Liberia
ha	hectare(s)
HANDS	Health, Agriculture, and Nutrition Development for Sustainability
HDI	Human Development Index
ICC	International Criminal Court
ICT	Information Communication Technology

IR	Intermediate Results
kg	kilogram(s)
km	kilometer(s)
l	liter
LASIP	Liberia Agriculture Sector Investment Program
LAUNCH	Liberian Agricultural Upgrading, Nutrition and Child Health Project
LACC	Liberian Anti-Corruption Commission
LISGIS	Liberia Institute of Statistics and Geo -Information Services
m	meter(s)
mm	millimeter(s)
MOA	Ministry of Agriculture
NARDA	The New African Research and Development Agency
NGO	nongovernmental organization
OICI	Opportunities Industrialization Centers International
PPP	Public-Private Partnership
PRMGE	World Bank Gender and Development Group
U.N.	United Nations
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific, and Cultural Organization
USAID	U.S. Agency for International Development
WFP	World Food Programme
WHO	World Health Organization

Contents

Introduction

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 Presidential Feed the Future (FTF) Initiative, which strives to increase agricultural productivity and the incomes of both men and women in rural areas who rely on agriculture for their livelihoods.

This landscape study provides an overview of Liberia's agriculture and the status of the country's extension system. It also provides information on the prevalence of poverty, nutrition and gender related issues in the country with special focus on rural areas. It summarizes Liberia's current agricultural and nutrition policy. This report provides a summary of several on-going projects by the USG and other donors in the country related to agriculture extension, and gender and nutrition impacts.

INGENAES supports the development of improved extension and advisory systems (EAS) to reduce gender gaps in agricultural extension services, increase empowerment of women farmers, and 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 NGO practitioners, and donors.

INGENAES efforts will strengthen the capacity of key stakeholders and providing the fora and networks for them to coordinate and reach agreement on policies and strategies to implement improved EAS that better meet the needs of men and women farmers. While INGENAES project will not directly monitor beneficiary impact, it will focus on changes in institutions that directly impact men and women who access agricultural information, training, technologies and nutrition information. Improved services empower women and engage men.

INGENAES will strengthen institutions by identifying their needs and strengthening their capacity to effectively integrate gender and nutrition sensitive information and activities into agricultural extension systems with the aim 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.

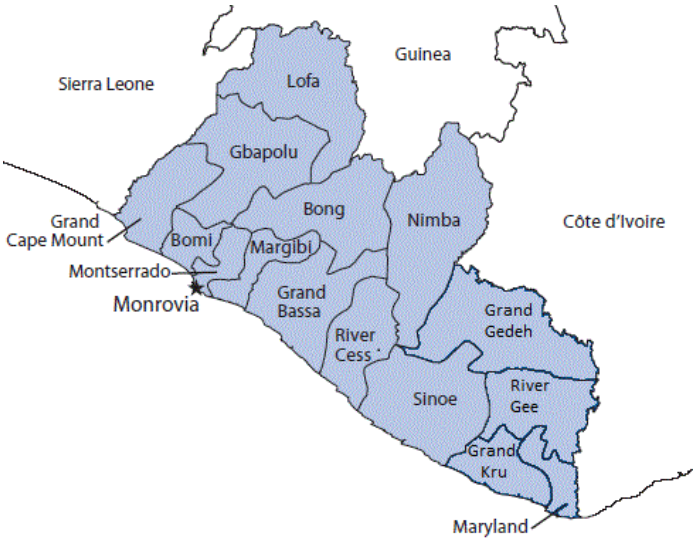
Indicative activities of the INGENAES project include: learning exchanges, assessments, curricula development, training into action, mentoring relationships, internship experiences, and networks that focus on identifying gender-responsive and nutrition-sensitive innovations that can be promoted by EAS organizations, and adopted by men and women farmers. Developing these outputs collaboratively with agricultural 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 the incentives to make changes (e.g., set new policies, employ new management practices, modify organizational structures, make changes in practice, 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, a simple description of the pluralistic extension system, nutrition related initiatives, and gender issues. As such, the landscape study is intended as a preparatory tool and handy reference document for work in country. Each landscape study will be updated periodically as INGENAES continues to engage in that country and identifies new key contacts, organizations, and initiatives.

Background

Statistics

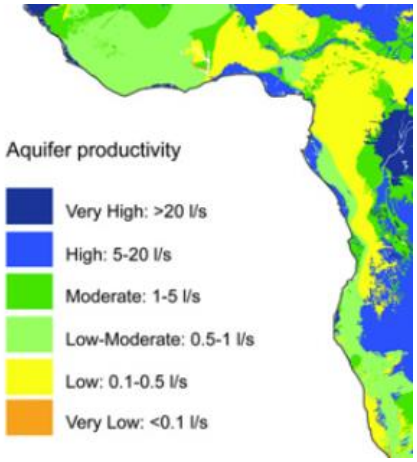
Liberia is located on the North Atlantic Coast of humid tropical West Africa and is bordered by Sierra Leonne to the west, Guinea to the north, and Cote D'Ivoire to the east. Liberia is Africa's oldest republic, established in 1874 (FAO, 2016). The country occupies roughly 9.8 million hectares (Ha), of which half is tropical forest and around 41% is arable land (FAO, 2016). The current population (2015) is 4.5 million with a growth rate (2014) of 2.4%, a multi decade low (WHO, 2016; World Bank, 2016).



52% of the population is under the age of 19 (USAID, 2013) with only 16% of the population between the ages of 40-49 (LISGIS, 2013). 95% of the population is comprised of sixteen indigenous ethnic groups: Kpelle, Bassa, Gio, Kru, Grebo, Mano, Krahn, Gola, Gbandi, Loma, Kissi, Vai, Dei, Belle, Mandingo, and Mende (Larbi, 2012). The remaining 5% of the population is made up of Liberia's historic ruling class, the Americo-Liberians, the descendants of African American colonists; and the Congo people, descendants of freed slaves from the Caribbean (Larbi, 2012). The country is 86% Christian and 10.8% Muslim (LISGIS, 2013). Over 60% of the population lives in urban areas, with roughly 36% living in and around Monrovia, the capitol city (LISGIS, 2013). Life expectancy at birth is slightly higher for women (63 years) than for men (60 years), but has almost doubled from the 1960 life expectancy at birth of 35 years (World Bank, 2016). It is ranked as a low income country by the World Bank (2016) and is also classified as a least-developed and food deficit country (WFP, 2015). Liberia scores 0.43 on the Human Development Index (HDI) ranking it 177 out of 188 countries (UNDP, 2016), and placing Liberia in the low human development category. This ranks Liberia below the average ranking of countries in Sub-Saharan Africa and within the low human development group (UNDP, 2015)[1].

Geography, Climate, and Environment

The majority of Liberia, with the exception of the northern savannah region, lies within the tropical rain forest belt of West Africa. It contains approximately 43% of the upper Guinea Forest (4.9 million hectares), which has valuable timber species and significant biodiversity (Larbi, 2012). Liberia has two primary seasons: a rainy season from May to October, and a dry season from November to April (Larbi, 2012). However, the temperature varies little throughout the year, ranging between 26°C to 28°C (78.8°f to 82.4°f) (Larbi, 2012). There are four main topographic regions in Liberia: the coastal plains, upper highland tropical forest, lower tropical forest, and northern



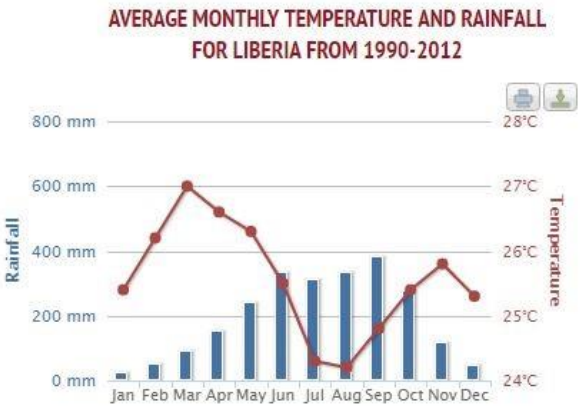
(MacDonald et al., 2012)

[1] Using a Multidimensional Poverty Index, which weights deprivations of education, health and standard of living at the household level, an estimated 70.1% of the population, approximately 3,010,000 people, lives in multidimensional poverty (deprivation score of 33%) and 35.4% of the population lives in severe multidimensional poverty (deprivation score of 50% or greater) (UNDP, 2016). A vast majority of the population, 83.8%, lives below the income poverty line of $1.25 USD per day (UNDP, 2016), and approximately 48.9% of the population is employed in agriculture (UNDP, 2016).

savannah. The coastal plains receive the greatest amount of annual rainfall (4,450-4,550mm), followed by the lower tropical forest (3,000-4,100mm), the upper highland tropical forest (1,265-3,200mm), and northern savannah (700-1,750mm) (Larbi, 2012). Most regions of Liberia have a water surplus during the rainy season (Larbi, 2012) and fresh water withdrawals account for only 0.1% of the total renewable fresh water resources (UNDP, 2016). Groundwater is accessible to farmers in much of the country with extremely shallow ground water depths (1-25m) (MacDonald, et al., 2012). However, due to specific soil types and depths, groundwater holding capacity is limited (only 86km$^{3)}$ and overall aquafer productivity is low to moderate (0.5-1 l/s) (MacDonald, et al., 2012).[2] Liberia's limited groundwater holding capacity and low aquifer productivity make agriculture particularly susceptible to climate change as the water table requires large amounts of rainfall with a broad annual distribution to recharge (Climate Change Portal, 2016; MacDonald, et al., 2016). Critical environmental issues include rainforest deforestation and resulting soil erosion and biodiversity loss, and the pollution of coastal waters and fisheries from oil residue and raw sewage leaving the large coastal urban areas (USAID, 2010). The main causes of deforestation include, traditional swidden farming (slash and burn), uncontrolled logging, fuelwood harvesting, and mineral exploitation (USAID, 2010).

History

Although there are no written records, anthropological studies suggest that modern-day Liberia was first settled by humans around the 12th century by Kwa, Deys, Bassa, and Kru speaking ethnic groups pushed south by the expansion of Muslim Mende speaking empires in the Sahelian belt of modern-day Mali, Senegal, and Guinea (Dunn-marcos, et al., 2005). The first documented European contact with the peoples of modern-day Liberia occurred in the 15th century when Portuguese and Dutch merchants began trading with local populations for the highly coveted malagueta pepper (*Capsicum frutescens*), as well as gold dust and ivory (Dunn-marcos, et al., 2005). The presence of lucrative local commodities and resources such as arable land for rice production, cotton cloth, gold, iron, pepper, and ivory, fueled three centuries of inter-ethnic trade and conflict in the region (Dunn-marcos, et al., 2005). By the early 19th century, two confederations dominated the region – the Muslim Mandingo Condo Confederation and the Animist Gola Confederation consisting of Vai, Deys, Mende, Kissi, Loma, and Gbandi chiefdoms (Dunn-marcos, et al., 2005). The historical rivalries and unions between many of the indigenous ethnic groups endured the Americo-Liberian Colonization era and contributed to violent inter-ethnic conflict during Liberia's decades long civil war (Ellis, 1995). Some inter-ethnic tensions and biases,



(Climate Change Portal, 2016)

[2] Standard US agricultural irrigation systems in the central plains draw approximately 50l/s and even the lowest draw commercial irrigation systems in the US draw 5l/s (MacDonald, et al., 2012). This means that water capture systems might be required for large scale irrigation systems outside of the rainy season.

particularly around the Mandingo ethnic group, remain within Liberian society today (Konneh, 1996).[3]

The Firestone plantation is still in operation and the Staff Club and adjoining golf course are open to the public. Photo by Austin Peterson, 2016

The coastal region of modern-day Liberia was first colonized in 1822 by a group of African-American freemen, and freed African-American slaves. As a solution to the growing turmoil of the domestic politics of slavery and race in the United States, the colonial enterprise endeavored to create a new homeland on the African continent for American descendants of Africans captured into slavery (McPherson, 1891, Dunn-marcos, et al., 2005; Department of State, 2016). In a rare confluence of opposing special-interests and ideologies, the initial colonial activities were funded and organized in partnership between wealthy African-American merchants, white northern abolitionists, and white southern slave owners (McPherson, 1891). Liberia declared independence from the United States in 1847, but the colonization movement, supported by U.S. based funding, continued until the start of the American Civil War in 1860 (McPherson, 1891). The establishment of a ruling class of former African-American freemen and freed slaves, known as Americo-Liberians, resulted in over 150 years of political, militaristic, religious, and economic domination of the indigenous peoples of Liberia (McPherson, 1891; Murphey, et al., 2016).

Further complicating the relationship between the United States and Liberia, in the early 1900's, under pressure from the United States, the Republic of Liberia began leasing large areas of land for plantation use by American companies (Anjali, 2002; Kieh, 2012). The first such overly favorable land concession went to the Firestone company when it received one million acres at six cents per acre for a term of 99 years (Gifford, 2002; Kieh, 2012). The terms of the leases were disproportionately in favor of the American companies and the working conditions of the agricultural laborers on site violated many of the human rights standards of the day (Anjali, 2002). Upon observation of the Firestone plantation in 1930, the League of nations deemed the working conditions as, "hardly distinguishable from slavery," (Anjali, 2002). While working conditions on agricultural concessions have improved dramatically from these early days, the practice of land concession and the associated costs and benefits to the economy, environment, and local communities remains highly contentious, particularly within the rubber, oil palm, and mining industries (Evans, 2013; Lomax, 2015).

[3] Supported by the author's conversations with Liberian academics and expatriate development workers.

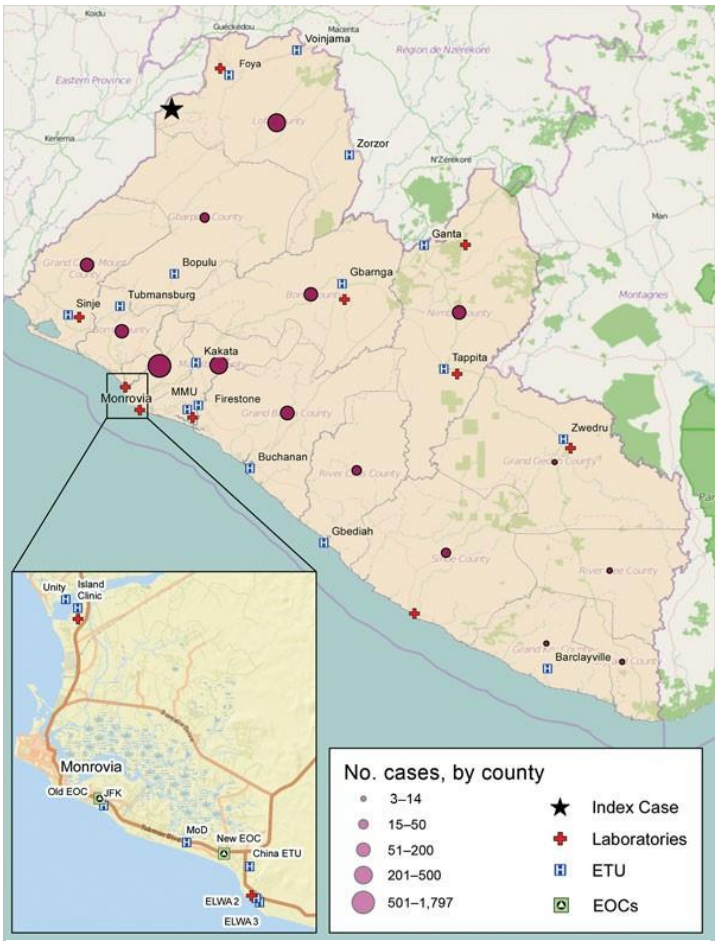
Once a five-star hotel and symbol of Liberian prosperity, the Ducor Hotel now sits derelict on the highest point overlooking Monrovia. Photo by Austin Peterson, 2016

Americo-Liberian rule continued until 1980, when rising indigenous anger toward the Americo-Liberian ruling class, fueled by government increases in imported rice, led to a violent coup d'etat by Samuel Doe (Anjali, 2002; Murphey, et al., 2016). Doe, a 28-year-old indigenous master sergeant proved to be an inexperienced head of state, and interethnic tensions and economic destabilization quickly mounted under his administration (Anjali, 2002). The following violent overthrow of Doe in 1990 by rebel leaders Charles Taylor and Prince Johnson, led the country into two consecutive civil wars, massive population displacement, the total collapse of the Liberian economy and infrastructure, and over a quarter of a million deaths (Murphey, et al., 2016). The conflict embroiled neighboring Sierra Leone, Guinea, and Cote D'Ivoire, and led to the United Nations International Criminal Court (ICC) indictment of Charles Taylor for his architecture of systematic rape, mutilation, and conscription of child soldiers (Human Rights Watch, 1999; Paterson, 2014). Charles Taylor was sentenced to 50 years' imprisonment by the ICC at The Hague on September 26, 2013 for war crimes committed in Sierra Leone (Paterson, 2014). The signing of the Accra Peace Agreement on August 18, 2003 brought an end to hostilities and in 2006, Ellen Johnson Sirleaf, a former Liberian Minister of Finance, was elected President (Murphey, et al., 2016). President Sirleaf was re-elected for a second term in 2011 and will serve until 2017. Her administration continues to rebuild the country through foreign investment and the reconstruction of social institutions and transportation infrastructure with the support of foreign aid and a substantial UN Mission in Liberia (UNMIL) security force (Murphey, et al., 2016). However, at the time of writing UNMIL was in the process of drawing down its infantry and police forces by over two thirds, and with critical presidential elections scheduled to take place in October of 2017, the future stability of Liberia remains uncertain (UNMIL, 2016).

Ebola Outbreak

The Ebola outbreak that started in neighboring Guinea in February 2014, spread to Liberia in March 2014. The low capacity of public health infrastructure in the three most affected countries, Guinea, Sierra Leone, and Liberia, allowed the outbreak to expand to epidemic proportions (Nyenswah, 2016). In Liberia alone, there were 10,772 suspected, probable, and confirmed cases resulting in 4,808 deaths - a disproportionately high mortality rate compared to figures from Guinea and Sierra Leone (CDC, 2015). The Ebola outbreak in Liberia accounted for 37% of the total cases and 42% of the total deaths counted in Guinea, Sierra Leone, and Liberia (Nyenswah, 2016).

The effects of the Ebola epidemic have been devastating to the national healthcare infrastructure, economy, general population, and agricultural systems (Nyenswah, 2016). The fiscal cost of controlling the epidemic, combined with an increase in unemployment and a decrease in the export of rubber and iron ore brought economic growth to a near halt (USAID, 2016). The fear of Ebola prevented both consumers and producers from entering markets, which caused increases in food scarcity, caused the price of food to rise sharply, and resulted in reduced caloric intake for many already food insecure families (USAID, 2016). However, despite the negative effects of the Ebola epidemic on Liberia's economy and markets and an associated reduction in market activity by as much as 20-30%, there have been no major shifts in consumption patterns of agricultural goods, suggesting a rapid resurgence of agricultural consumption to pre-Ebola levels is likely (Melrose, et al., 2016).

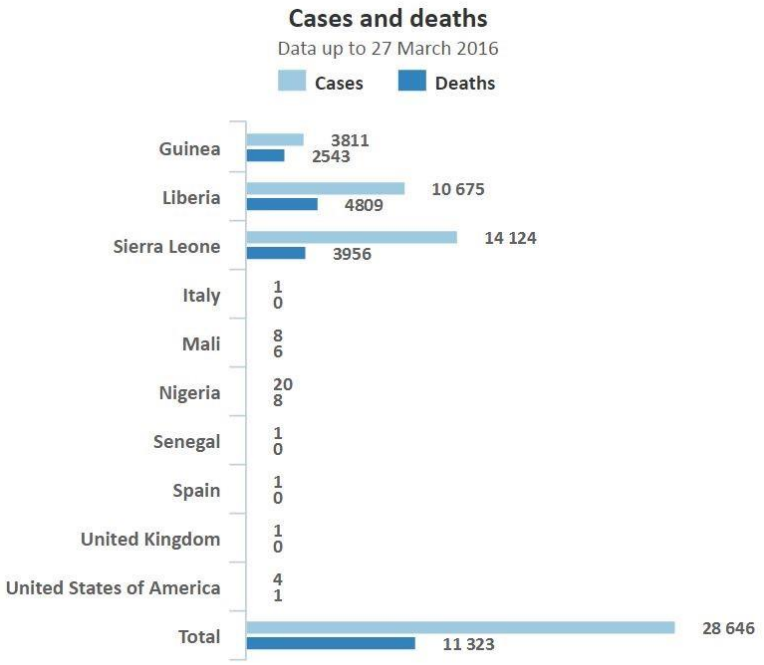


Ebola Cases by County (Nyenswah, 2016)

The long-term health effects of the virus for survivors are not fully understood, but at a minimum include disabling joint pain, impaired vision and hearing, and possible prolonged viral persistence in semen resulting in delayed sexual transmission of the disease (Nyenswah, 2016; USAID, 2016). The psychological and sociological effects of the epidemic require further study as well, especially around the care of Ebola orphans and the discrimination and social ostracism of Ebola survivors (Nyenswah, 2016). Social stigmas and ostracism of Ebola survivors increase the risk of food and nutrition insecurity in an already vulnerable population, and should be considered when developing agricultural extension programming. Following the epidemic, national priorities include surveillance for resurgence of the virus, restoration of health services, strengthening of laboratory and emergency operations, increased outbreak response capacity, and the general improvement of public health and hygiene (Nyenswah, 2016, USAID, 2016).

Politics and Economy

The economy of Liberia was severely damaged by the two civil wars from 1990 to 2003 and again by the Ebola epidemic in 2014/2015. Since the conflict ended in 2003, the country has steadily become more politically and economically stable, but claims of cronyism and corruption within government remain prevalent.



(Nyenswah, 2016)

Currently, international investors are reentering the country to pursue mineral and land rights to iron ore, gold, timber, and cash crops such as oil palm, rubber, coffee, cocoa, and sugar (Murphey, et al. 2016). Despite the resurgence of international investors, 83.8% of the population lives below the poverty line of US$1.25 a day (WFP, 2015) and many Liberians living in poverty blame the slow economic growth of the past decade on the government's inability to create new jobs and provide adequate education and infrastructure (Murphey, et al. 2016). Furthermore, recent increases in government concessions to mining and plantation concerns have led to political instability within local communities who claim they are being pushed off their land without adequate compensation (Evens, et al., 2013; Murphey, et al., 2016). The economy was further destabilized and damaged by the Ebola epidemic of 2014 that reduced economic growth to 1.8% from 8.1% growth rate of the previous year (USAID Nutrition Profile, 2015; Murphey, et al., 2016). As of the latest World Bank statistics published prior to the Ebola crises in 2014, the GNI per capita was $370 USD, the highest per capita GNI since just prior to the outbreak of civil war in 1988 (World Bank, 2016). Moving forward, improvements to Ebola surveillance and response, and the development of the agricultural sector will be necessary to prevent further economic downturn and to rebuild the economy over time (USAID, 2016).

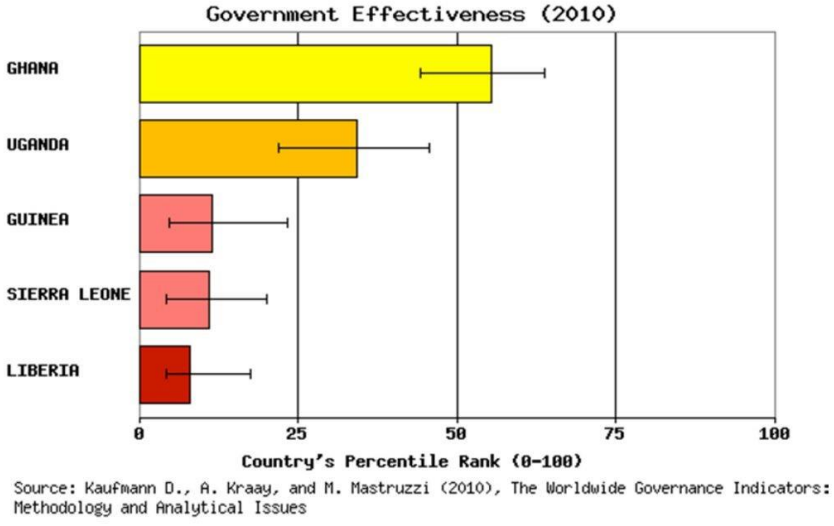
There are still many accusations of corruption within the government, and while studies show that a majority of Liberians have confidence in President Sirleaf, many do not trust that the government is there to support them (USAID, 2013). This is due to a history of social, political, and economic systems built on extraction and the exploitation of indigenous Liberians and the persistence of such practices today (USAID, 2013). Despite the strides of President Sirleaf's government, including an ongoing anti-corruption campaign (LACC, 2016), politics remain rooted in cronyism and focus on personality rather than leadership and organizational capacity (USAID, 2013). The 2015 Transparency International Corruption Perception Index (CPI) ranks Liberia in the 36th percentile[4] globally and marks an eight-point increase in corruption from the 2012 CPI (Transparency International, 2016). Despite a relatively low CPI score and ample anecdotal evidence of persistent corruption, Liberia still ranks higher on Transparency International's CPI than a majority of the countries in West Africa, and much higher than its bordering neighbors of Sierra Leone, Guinea, and Cote D'Ivoire (Transparency International, 2016).

Significant Refugee Population

A Liberian Anti Corruption Committee (LACC) billboard on Tubman Blvd., Monrovia. Photo by Austin Peterson, 2016

Following the 14 years of civil war, in which over 80% of the population was internally displaced, and the 2010 post-electoral crisis in neighboring Cote D'Ivoire, Liberia is estimated to host between 16,800 (UNDP, 2016) and 33,000 refugees (WFP, 2016). Those living in refugee camps are particularly vulnerable to food price fluctuations and food insecurity remains high (WFP, 2016).

Infrastructure and Institutional Capacity



Poor infrastructure, productive capacity, and public sector service delivery are critical barriers to Liberia's development (USAID, 2013; LACC, 2016). Under President Ellen Johnson Sirleaf, the country has started the slow process of rebuilding roads, re-developing educational capacity, establishing information communication networks, and stabilizing macroeconomic conditions (USAID, 2013). Currently, 73.4% of the population has a mobile phone – roughly equivalent to mobile phone use in neighboring Guinea and Sierra Leone, but only 5.4% of the

[4] A ranking of 83/168 places Liberia on par with China and Colombia on Transparency International's Corruption Perception Index.

population has access to the internet, significantly restricting the freedom of information transfer (UNDP, 2016). Only 1.2% of the rural population has electricity and there are few paved roads outside of the coastal urban population centers (UNDP, 2016). The problems of unpaved roads are particularly acute during the rainy season when many farm to market roads are rendered impassible and prohibit rural farmers from getting their produce to market. During the civil war, many of Liberia's educated citizens were either killed or fled the country, and the education system was destroyed, exacerbating Liberia's challenges to redevelop the government and private sectors (USAID, 2013).

Education

Many schools were destroyed as a result of conflict, leaving a generation of Liberians without the opportunity to get an education. As a result, only 43% of adults aged 15 or older are literate (UNDP, 2016) and there is a deficit of qualified school teachers (Murphey, et al., 2016). The educational system itself lacks administrative capacity, and is considered inequitable and unaccountable to students (WFP, 2016). The Ebola epidemic further disrupted the education system, as public schools shut down to prevent the spread of the disease (WFP, 2016). Currently, children entering school are expected to attend for an average of 9 years, with 95.6% of children attending primary school, but only 38% of children (primarily boys) attending secondary school and only 11.6% receiving post-secondary education (UNDP, 2016). Although these statistics are low by global standards, they present a marked increase from the current mean education level of the total population at only 4.1 years of schooling (UNDP, 2016). Current government expenditure on education represents 2.8% of GDP, roughly equal to that of neighboring Guinea and Sierra Leone (UNDP, 2016). The majority of children in Liberia face obstacles to education, including general poverty, low family prioritization of education, and delayed entry into schooling (WFP, 2016). Girls are especially unlikely to complete secondary school, tending to drop out during grades 4-6 due to early marriage, pregnancy, and family economic pressures (WFP, 2016). In an attempt to resolve the systemic problems of the educational system in Liberia, the GOL announced in 2016 that it would entirely privatize its primary school system through public-private partnership (PPP), setting a global precedent (ESCR, 2016). Pilot funding for the program is coming from the United Nations Educational, Scientific, and Cultural Organization (UNESCO) with financial support from the Chinese Government and aims to outsource all primary education to the private sector over a five-year period (ESCR, 2016). The Special Rapporteur on the Right to Education of the United Nations Office of Human Rights, Kishore Singh, has come out in strong opposition to the program, arguing that the provision of public education is a core function of the state and that the privatization of a national public education system is a blatant violation of Liberia's international obligation under the right to education (UN, 2016).

Agriculture and Markets

The agricultural sector is both the dominant contributor to Liberia's export trade, and the primary source of income for roughly 70% of the Liberian population (Larbi, 2012). Subsistence farming is the predominant form of agriculture, although there is a history of corporate plantation agriculture which persists today (Larbi, 2012). Slash and burn farming, shifting cultivation and rotational bush-fallowing systems comprise the majority of subsistence activities (Namubiru-Mwaura, 2012). Farm sizes vary between ethnic group and region from one to four acres, and fallow cycles can range from one to as many as 20 years (Namubiru-Mwaura, 2012). Upland rice is the predominant staple crop and is grown

by three quarters of the population, followed closely by cassava, grown by a little over 60% of the population (Larbi, 2012). As of 2009, rice and cassava accounted for nearly 50% of Liberia's agricultural GDP or 25% of the total national GDP (Larbi, 2012), although it is likely that when the 2008-2015 census numbers are released, rice and cassava will make up a smaller percentage of agricultural and total GDP due to the resurgence of rubber production and iron ore mining activities (Syed, 2016).

A weekly market in Margibi County. The middle of the rainy season brings vegetable produce and seasonal delicacies such as giant snails to market. Photo by Austin Peterson, 2016

Liberia can be divided into three primary agro-ecological zones: the coastal plains, upper highland tropical forest, and lower tropical forest. The coastal plains receive the most annual rainfall of any zone in Liberia and are ideally suited for both upland and lowland rice production (Larbi, 2012). Cassava, sugarcane, rubber, and cocoa are also important crops in the coastal plains (Larbi, 2012). In the upper highland tropical forest cocoa, coffee, rubber, citrus, and oil palm are the main sources of household agricultural income, and rice, yam, taro, plantain, and potato are typically grown for household consumption (Larbi, 2012). The lower tropical forest is ideal for rubber, cocoa, coffee, and sugarcane, and the majority of commercial plantation production of these crops is found in the zone (Larbi, 2012). Agricultural production in Liberia is highly seasonal, with the vast majority of rice, cassava, and vegetable production taking place during the rainy season between May and October (Larbi, 2012; EAT, 2015).

Rice and Cassava

Upland rice is frequently intercropped with vegetables including okra, maize, cucumber, bitter melon, pepper, potatoes, eggplant, pumpkin, peanut, yam, and beans (Namubiru-Mwaura, 2012). Lowland, or "swamp" rice production has been promoted heavily by both the national Agricultural Extension and Advisory Services, and local NGOs for the improved yields and potential market value, but has been adopted inconsistently by farmers accustomed to growing upland varieties (Namubiru-Mwaura, 2012). The lack of adoption of swamp rice may be explained by several factors including barriers to access of inputs and extension services and a market climate that renders local rice production uncompetitive with imported rice (EAT, 2015). The 2015 USAID Enabling Agricultural Trade (EAT) Liberia Market Study states explicitly:

> Liberia's national food security policy priorities are principally (1) to keep the cost of food affordable and (2) to avoid civil strife. These priorities surround the most important basic foodstuff in the country, rice, which accounts for 85% of the calories consumed in Liberia.

> With respect to the first priority, the government of Liberia (GOL) keeps rice affordable by allowing it to be imported duty-free. This means that **it is not feasible for smallholder rice producers to compete with zero-duty imported rice** [sic]. Therefore, further investment in the rice sector should be carefully considered (EAT, 2015).

Furthermore, the 2016 Food and Enterprise Development (FED) Final Summary Finding reports that with poor infrastructure, limited market access, and the high cost of improved inputs, farmers are unlikely to introduce new technologies without input subsidies and easily accessible markets. Furthermore, if paddy rice were scaled up, significant increases in rice yield would likely depress rice prices, negatively effecting the direct financial returns of the farmer, making it even more difficult for rural farmers without market access to sell their surplus (FED, 2016). Similarly, the EAT report suggests that until processing infrastructure is developed, cassava has little prospect for value addition that would benefit small holder farmers (EAT, 2015).

Tree Crops

Suitable to Liberia's humid tropical climate, tree crops, particularly rubber, oil palm, cocoa, and coffee account for 34% of the agricultural GDP (Larbi, 2012). Although the majority of the tree crop GDP is derived from corporate plantation agriculture, "life trees" including, rubber, cocoa, coffee, and oil palm are an important economic, cultural, and political component to rural populations (Namubiru-Mwaura, 2012). "Life trees" have a life span longer than a human life, and can be used to lay claim to land under Liberia's indigenous tenure system (see Land Tenure below) (Namubiru-Mwaura, 2012). As natural rubber begins to fetch higher market prices, rubber production is increasing among rural populations (Namubiru-Mwaura, 2012). Similarly, Oil Palm, while produced on a large plantation scale by firms such as Sime Darby, still plays a critical role to many rural households for both income and nutrition (Evens, 2013). Mahmud Johnson, the founder of J-Palm Liberia, is piloting a new vertically integrated model of socially conscious private sector development that seeks to reduce community level oil palm processing and labor costs in exchange for a percentage of the oil produced (Johnson, 2016)[5]. If scaled out, this model has the potential to significantly increase community income and caloric intake as the labor required for traditional palm oil processing methods hinders communities from fully exploiting existing oil palm resources (Evens, 2013; Johnson, 2016). Cocoa, while produced in limited quantities in Liberia following the civil wars, remains an important crop in the region, including Liberia's bordering neighbor and world leader in cocoa production, Cote D'Ivoire (EAT, 2015). Cocoa production presents an excellent opportunity for Liberian small-holder farmers to diversify agricultural income and gain access to international markets (EAT, 2015).

Vegetables

The EAT report states that of the existing value chains in Liberia, vegetable production has the greatest potential to benefit small-holder farmers, particularly those living on the peri-urban fringe (EAT, 2015). Currently, the majority of vegetables produced locally are produced during the rainy season. During the dry season, vegetable production plummets and wholesale and retail prices increase by two to five times (EAT, 2015). Even those vegetables produced during the rainy season do not fully satisfy local demand,

[5] Visit J-Palm Liberia's Website at: www.jpalmliberia.com

and are not produced at a consistent quality or quantity adequate to meet the procurement demands of plantation and mining concessions, hotels and restaurants, or upscale urban supermarkets which import nearly 100% of fresh vegetables (Musinamwana, 2014; EAT, 2015). The mining industry alone is projected to demand USD 11 million for food and beverage in 2016. While the exact percentage of the procurement that fresh vegetables would represent is unclear, local procurement would still result in providing a living income to many thousands of Liberians (Musinamwana, 2014). Unfortunately, the capacity for contract agriculture is limited or non-existent at the rural smallholder farmer level (Perry, 2016).

Peanuts and Pulses

Peanuts and a number of pulses are sold in local Liberian markets, but local production does not meet annual consumption levels and a majority of pulses are imported from neighboring countries during the dry season. Improvements to legume yields have the potential to nudge out imports as they share economies of scope with upland rice production, are relatively easy for smallholder farmers to produce with existing information and input resources, and require little to no fertilizer inputs (EAT, 2015).

Livestock

During the civil wars, livestock production came to a halt and livestock populations were almost completely diminished. Currently, the majority of animal protein comes from fish and "bush meat", although bush meat consumption is greatly reduced following the Ebola epidemic (EAT, 2015). Most eggs, chicken, pork, and beef are imported (EAT, 2015). Livestock production, particularly household level production of chicken, goat, duck, pig, sheep, or cattle, accounts for only 14% of the agricultural GDP (Larbi, 2012). Demand for animal products remains much higher than supply and to date, there is no dairy industry in Liberia and poultry production is far below desired capacity, presenting lucrative potential for increased home-scale income, as well as for mid to large scale producers (Larbi, 2012, EAT, 2015). The primary barriers to increased poultry production are a lack of inexpensive feed and persistent health threats. (EAT, 2015, Fredericks, 2016).

Fish

Liberia is fortunate to have bountiful marine and fresh water resources and over 80% of the population consumes fish as the primary source of animal protein (Larbi, 2012). However, the fishery subsector is underdeveloped and accounts for only 3% of national GDP (Larbi, 2012). Currently, very little fish farming is practiced in Liberia, but considering the climate, the abundance of water, and the unmet market demand for fish protein, *Tilapia* and catfish farming presents a possible new nutrition and income stream for smallholder farmers (EAT, 2015). As this is a new sector to Liberia, realizing its potential will require research from Liberia's agricultural research institutes, the availability of necessary inputs on Liberian markets, and training and technical assistance from extension services (EAT, 2015).[6]

[6] At the time of writing, the Cuttington University College of Agricultural Sciences was in the early stages of developing several smallholder-scale aquaponics systems using *Tilapia* and catfish.

Land Tenure

The land tenure system in Liberia, rooted in both colonial law and traditional indigenous practice, is complex and presents major challenges to agricultural production, social equity, and gender equality. There are three types of land ownership prevalent in Liberia: public land, individual proprietorship, and customary communal ownership (Larbi, 2012). While customary communal ownership, stewarded by village chiefs, is the predominate form of land tenure (Larbi, 2012), much of the coastal region of Liberia is owned under Western statutory law by the Americo-Liberian urban elite (USAID, 2010). Historically, state policy recognized customary communal ownership as full ownership rights, however over time, unequitable reforms to policy permitted the state to grant large concessions of land to corporate agricultural and mineral extraction concerns without adequate approval from or compensation to indigenous communities (USAID, 2010). The resulting tension between indigenous communities and government was a key contributor to the civil war (USAID, 2010). Inequitable land tenure policy was exacerbated during the civil war years when national forestry law was passed stating that forest resources (trees) belonged to the state, even when the land itself was customary communal property (USAID, 2010).

During the war, over 80% of the population was internally displaced, contributing further to dispute and confusion surrounding land ownership as returning refugees found their lands occupied by members of other ethnic groups (USAID, 2010). The lack of pre-war land registries, inconsistent land tenure laws, and poor land administration present significant challenges to post-conflict reconstruction (USAID, 2010). As of 2010, approximately 90% of civil cases involved disputes over land ownership (USAID, 2010). The GOL is working to institute land policy reform, dispute resolution mechanisms, the recognition of customary communal ownership, and the promotion of community forestry development, but faces many challenges in the wake of the civil war (USAID, 2010).

Principle among the challenges faced to land tenure policy re-establishment is the shifting nature of customary communal ownership. Traditional communal ownership is dynamic and capable of changing to meet physical, economic, and social realities, but has developed differently across ethnic groups and is difficult for the national government to regulate (Namubiru-Mwaura, 2012). Individual access to customary communal land is granted through family and lineage and is often allocated on an annual or biennial basis for seasonal crop production (Namubiru-Mwaura, 2012). While not fully recognized by the GOL, in practice, the act of planting life trees on customary communal land can help secure individual access to that land for the planter's immediate family. In the post-conflict context, this traditional practice of land acquisition has contributed to interethnic dispute over land ownership (Namubiru-Mwaura, 2012).

Food and Nutrition Profile

Nearly 80% of those living in the urban center of greater Monrovia are considered food secure, but only 50% of the total population is food secure, and 2% of all households are considered severely food insecure (WFP, 2013; USAID, 2016). Just over 20% of households do not have access to an adequate diet, 41% of households report not having enough food on a weekly basis, and 18% of households report using emergency coping strategies such as begging to meet basic food needs (WFP Brief, 2016). For a quarter of the population, food expenditures exceed 65% of total household expenditures (WFP Brief, 2016). The most food insecure counties remain in south eastern Liberia where a lack of transportation

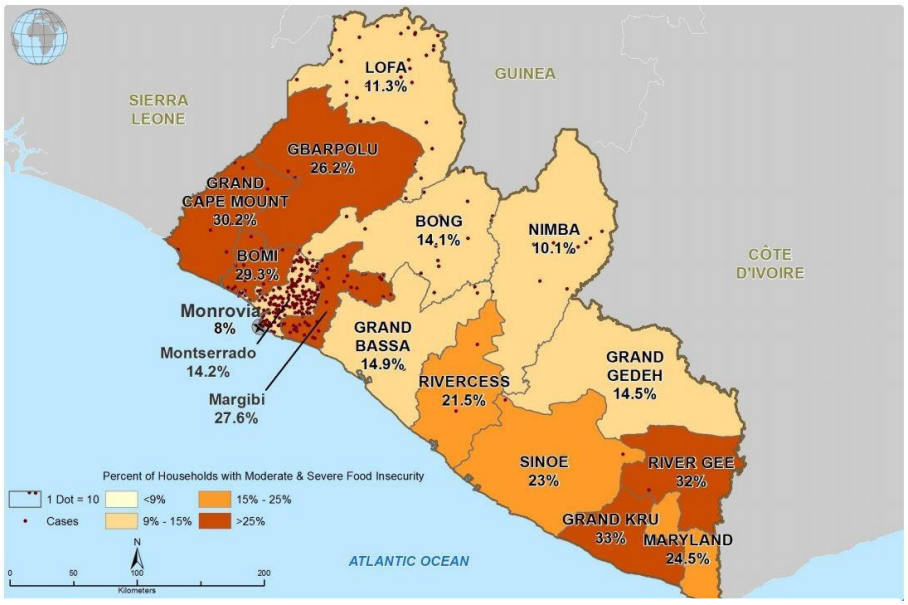
infrastructure restricts physical access to markets (Murphey, et al., 2016, WFP, 2016). Chronic and acute undernutrition still persist, but are in decline since the end of the conflict. Just over 30% of children under five are stunted, 15% are underweight, and micronutrient deficiencies are highly prevalent (USAID, 2016). Just two crops, rice and cassava provide the majority of caloric intake. In 2007, carbohydrate rich foods made up 63% of the average Liberian diet, with just over 50% from rice alone (World Bank, 2012).

Since 2008, Liberia has started several initiatives aimed at addressing food and nutrition insecurity. In 2008, the Nutrition Division in the Ministry of Health and Social Welfare began implementation of the National Policy on Nutrition, focusing on increasing the use of locally produced foods, and reducing chronic and acute malnutrition through supplementation and staple food fortification (USAID, 2016).

Liberia Nutrition Data		
Population (2012)	3.9 million	
Population under 5 years of age (0-59 months, 2012)	634,000	
	DHS 2007[7]	**DHS 2013**[6]
Prevalence of stunting among children under 5 (0-59 months)	39%	32%
Prevalence of underweight among children under 5 (0-59 months)	19%	15%
Prevalence of wasting among children under 5 (0-59 months)	8%	6%
Prevalence of anemia among children aged 6-59 months	n/a	63%[8]
Prevalence of anemia among women of reproductive age (15-49 years)	n/a	33%[9]
Prevalence of thinness among women of reproductive age (15-49 years)	10%	n/a
Prevalence of children aged 0-5 months exclusively breastfed	29%	55%
Prevalence of breastfed children aged 6-23 months receiving a minimum acceptable diet	30%	n/a

(USAID, 2016)

In 2009, Liberia signed a Comprehensive African Agriculture Development Programme (CAADP) Compact with other African governments to promote economic growth in the region through agricultural development (USAID, 2016). In 2011, the GOL finalized the Liberia Agriculture Sector Investment Program (LASIP) to align national objectives with the CAADP. The program focuses on land and water development, food and nutrition security, value chain and market development, and institutional development. To achieve these goals, the GOL has pledged to increase expenditures on the agricultural sector from 3% of GDP to 10% by the end of 2016 (USAID, 2016). In



(WFP Brief, 2016)

2012, the GOL launched the Poverty Reduction Strategy to transform Liberia into a middle-income country by 2030. The strategy emphasizes agricultural development, and food security and nutrition (USAID, 2012).

The 2014/15 Ebola epidemic was a major setback to the achievement of Liberia's food and nutrition security goals, and the country is currently not on track to eradicate extreme poverty or undernutrition (USAID, 2016). Quarantine measures and the fear of contraction reduced the availability of laborers during the harvest season, which severely reduced agricultural output during the 2014 growing season (Murphey, et al., 2016). The inability to take agricultural work during peak labor periods caused incomes to drop for 35% of households from the previous rainy season (WFP Brief, 2016). The closure of borders, implementation of roadblocks, and reduction of market activities drove a rapid increase in food prices (Murphey, et al., 2016). By May 2015, rice stock was depleted for one third of households and cassava stock was depleted for 18 percent of households (WFP Brief, 2016).

		Food secure	Marginally Food secure	Moderately Food insecure	Severely food inse-cure
Current status	Food Consumption	*Acceptable* 79%	-	*Limit* 16%	*Poor* 5%
Coping capacities	Economic vulnerability (% of food expenditures on total)	*<50%* 48%	*50-65%* 27%	*65-75%* 13%	*>75%* 12%
	Asset depletion	59%	11%	11%	18%
Food security classification		42%	42%	14%	2%
National prevalence of food insecurity households				**16%**	

(WFP Brief, 2016)

Gender Equity and Violence toward Women

Traditional Liberian culture and religion identify women as the weaker sex and tolerate female subordination and male superiority (UN Women, 2016). Nearly half of all Liberian girls (48%) are married before the age of 18 (UN Women, 2016), on average receive five fewer years of education than boys, and are expected to earn an annual income 33% lower than that of men (UNDP, 2016). 11.7% of girls give birth between the ages of 15 and 19 (UNDP, 2016). During the civil war, combatant forces – many of them soldiered by children – employed systematic rape and violence toward women as tools of terror and ethnic cleansing (Patterson, 2014). The effects of the conflict remain particularly acute as rape, sexual coercion, and domestic violence persist within Liberian society (UN Women, 2016). As of 2016, UN Women reports that, "44% of women aged 15 to 49 have experienced violence since the age of 15, 29% have experienced violence in the past 12 months, 17.6% have experienced sexual violence in their lifetime, and 10% state that their first sexual experience was forced against their will." As the GOL rebuilds the court system in the wake of the civil war, access to justice for women remains limited and rural women are particularly vulnerable as they are subject to customary law that does not adequately protect women's rights (UN Women, 2016). Despite pervasive gender inequality in Liberia, President Ellen Johnson Sirleaf was elected as Africa's first female president and has made strides to champion the rights of women (Murphey, et al., 2016).

Women in Agriculture

Agriculture is the predominate source of income generation for rural Liberian populations, and women make up half of Liberia's agricultural sector labor (PRMGE, 2010). However, there are significant gender disparities between men and women around the types of crops grown, access to quality inputs, and land tenure. While there are cultural norms surrounding gendered agricultural practice in Liberia, there is a fair amount of heterogeneity of practice between ethnic groups and the division of labor is not always strict (Namubiru-Mwaura, 2012). Generally speaking, women tend to contribute greater amounts of labor to food crop production, particularly vegetables, than men, while men tend to contribute greater amounts of labor to cash crop production than women (PRMGE, 2010). The production of staple crops such as rice and cassava tends to be shared by both women and men, but there are gendered divisions of labor between specific tasks, with women focusing on fencing, field clearing, felling, and brushing, and men focusing on harvesting, weeding, and planting, although there is little supportive data and experts tend to disagree about the exact gendered division of labor (PRMGE, 2010; BWI, 2016; Younn, 2016). Men tend to be responsible for the planting, cultivation, and care of life trees, however women often participate in maintenance and care (Namubiru-Mwaura, 2012). Men tend to be the primary sellers of tree products and women of vegetable products, but the extent to which the profits of agricultural sales are shared and norms around economic decision making vary significantly between ethnic groups and are difficult to generalize (Namubiru-Mwaura, 2012; USAID, 2016).

J-Palm Liberia is working to develop new revenue streams around agricultural byproducts that are traditionally controlled by women. Specifically, the kernel of the oil palm fruit, which can be processed into valuable oil product, is difficult to process under traditional methods and is commonly considered of little economic value. J-Palm Liberia is working to develop mechanized kernel processing that will allow rural women to sell an abundant, but previously unmarketable agricultural commodity (Johnson, 2016). Women also have more difficulty accessing agricultural inputs such as high quality seed and fertilizer than men, but where access to microfinance exists, women are represented in higher proportion than men (PRMGE, 2010).

Perhaps the greatest challenge to women in agriculture revolves around land tenure laws. Under customary communal ownership laws, rural women gain access to land through inheritance and communal allocation, similarly to men, but generally receive smaller, less desirable parcels (Namubiru-Mwaura, 2012) and generally own land in lower proportions (USAID, 2010). Traditionally, women's primary means of access is through marriage, as women relocate to the husband's community and are granted a portion of their husband's land for agricultural activities (Namubiru-Mwaura, 2012). In the case of divorce, women typically lose access to the land they tended while married to their husbands as they return to their natal community where they are granted a portion of their father's land (Namubiru-Mwaura, 2012). In 2003, the Equal Rights of the Customary Marriage Law of 1998 was approved, giving women in traditional marriages equal legal status regarding property and inheritance, but in practice customary gendered land tenure inequalities persist (USAID, 2010).

Agricultural Research and Extension

Extension and Advisory Services

Government extension services are housed in the Department of Regional Development, Research, and Extension (DRDRE) at the Ministry of Agriculture which has the core function of providing farmers agricultural extension services to promote improved productivity and income (GOLMoA, 2016). The DRDRE has a decentralized structure, with agricultural offices in all 15 counties and is currently establishing sub-offices at district levels (GOLMoA, 2016).

At the time of publication, the MOA directly employed 84 field staff and coordinated or directly managed an additional 80 field staff hired on determinate length contracts through donor funded projects (Perry, 2016). Of the MOA's direct hire staff, 15 are County Agricultural Coordinators (CACs), 63 are District Agricultural Officers, and the remaining 6 are Agricultural officers tasked with extension activities in Greater Monrovia (Perry, 2016). The Smallholder Agricultural Productivity Enhancement & Commercialization (SAPEC) Project is responsible for funding 52 field agents, the West Africa Agricultural Productivity Program (WAAPP-1C Liberia) is responsible for funding 8 field agents, and the Agricultural Sector Rehabilitation Project (ASRP) is responsible for funding 4 field agents (Perry, 2016).[7]

The CACs are responsible for overseeing county ag office activities and demonstration sites and supervising the activities of the DAOs and co-supervising the activities of partner-funded field agents (McNamara, 2011; Perry, 2016). At the time of publication, the MOA employs 6 female CACs (40%) and 2 female DAOs (3%), but is actively pursuing gender balance among field extension staff as the older, predominantly male extension staff reach retirement (Perry, 2016).

Resources and Logistics

The agriculture sector in Liberia is making the transition between post-conflict aid and reconstruction, to sector capacity development and economic self-sufficiency (McNamara, 2011). Underfunding, insufficient logistical resources, and lack of competency of some field staff remain chronic problems within the Ministry of Agriculture (MOA, 2016). While the MOA has made progress since 2011, when fewer than half of district level sub-offices had any staff member at all (McNamara, 2011) the number of MOA extension agents remains inadequate to serve the agricultural population (Jallay, 2016; Perry, 2016; Nypalue, 2016). The MOA mandates that each extension agent work with 25-30 farmers on a monthly basis, but the MOA does not collect data on community engagement (Perry, 2016). The 2015 MOA annual report provides three different estimates to the number of farmers reached by extension services at 41,615, 67,598, and 82,353 farmers reached (MOA, 2016), however these numbers are based on aggregated estimates from DOAs and CACs and most likely do not accurately describe extension activities (Perry, 2016) The best estimates from MOA personnel are that between 20 and 25% of Liberian agriculturalists have any form of access to MOA extension services, and that only between 45-60% of Liberian agriculturalists have access to extension services from any organization (Jallay, 2016;

[7] See Appendix B for a detailed description of each of the partner-funded programs currently engaged with MOA DRDRE.

Perry, 2016). The MOA is currently planning to create a real time extension activity data base scheduled for development from November 2016 to May 2017 for roll out during the 2017 growing season.[8]

The MOA also lacks logistical resources. As of 2011, each of the 15 CACs had access to quality vehicles (McNamara, 2011), but MOA personnel estimate that that is no longer the case, citing a lack of funding for maintenance and upkeep (Jallay, 2016; Perry, 2016).[9] Compounding the problems raised by a lack of MOA vehicles, the majority of roads in Liberia are unpaved and the rainy season (when extension and advisory services are the most necessary) renders them so muddy that they are inaccessible by any type of vehicle. This requires extension agents to walk to some villages, inhibiting access, or reducing the total number of communities a single extension officer can visit (Jallay, 2016).

Furthermore, many of the MOAs district agricultural officers (DAOs) are over the age of 50 and were hired at a time following the civil war when there was little availability of adequately trained extension staff (Perry, 2016). Many of the field staff are under educated in relevant fields and lack the information communication technology (ICT) skills necessary to take advantage of innovative extension methods (McNamara, 2011; Perry, 2016). Many younger potential recruits are attracted to higher paying work within the NGO and private sectors (McNamara, 2011; Nypalue, 2016; Perry, 2016). As the current cohort of extension agents reaches retirement age, as the Liberian economy improves, and as Liberian academic institutions strengthen and train new generations, the MOA intends to hire a younger, better trained, gender balanced cohort of extension agents (Nypalue, 2016; Perry, 2016).

During the reconstruction phase, many outside agencies and NGOs contributed to the agricultural sector through free distribution of food commodities and agricultural inputs as a necessary component of relief, resulting in a pluralistic extension landscape and differing opinions on best practices and approaches for the distribution of inputs (McNamara, 2011). At the time of publication, roughly 60 local and international NGOs were engaged in rural agricultural extension activities (GFRAS, 2016). Despite the existence of the New African Research and Development Agency (NARDA) and the African Forum for Agricultural Advisory Services (AFAAS), consortiums developed to coordinate extension activities across the galaxy of Liberian NGOs, and the existence of a Liberian extension harmonization policy established in 2012, the extension landscape remains extremely pluralistic in terms of extension messaging and philosophy (McNamara, 2011; GFRAS, 2016; Perry, 2016). Several MOA personnel cite lack of harmonization in extension messaging as one of the key barriers to effective best practice transfer to rural communities (Jallay, 2016; Perry, 2016). During the DRDRE September planning meeting, efforts to develop better systems to harmonize messaging were scheduled, but the specific details remain undefined.[10]

Further complicating extension messaging and delivery is Liberia's complex linguistic and cultural context in which language is often highly niched into relatively small geographic areas and in which many rural agricultural communities are not literate and do not speak English, or may speak a different variant of Liberian English than is spoken in the capital. In an attempt to address this complicated communication

[8] 2017 MOA Liberia Agriculture Transformation Agenda (LATA) meeting at DRDRE.
[9] Upon visiting the MOA offices in Monrovia, the author counted 23 non-functional MOA land cruisers and pickup trucks in the ministry parking lot.
[10]2017 MOA Liberia Agriculture Transformation Agenda (LATA) meeting at DRDRE.

issue, MOA has instituted a policy of only hiring CACs and DAOs from specific counties and regions to work within those same areas (Perry, 2016). However, finding extension agents with the appropriate combination of education, skill, and linguistic/cultural capabilities remains a critical challenge (Perry, 2016).

In an effort to improve baseline data collection, the MOA in partnership with the Global Agriculture and Food Security Program (GAFSP), Cellulant Mobile, and the African Development Bank have launched a farmer e-registration program as part of the Liberia Agriculture Transformation Agenda (LATA) (LATA, 2016; MOA, 2016). Launched in January of 2016, the program has registered 184,722 as of mid-September 2016 (LATA, 2016). The baseline data collected will help the MOA and other extension organizations prioritize highly vulnerable agricultural communities and serve as a platform for new eWallet based input distribution reforms (MOA, 2016).

Demonstration Sites and Extension Practices

Each of the 15 counties has a county level agricultural office managed by the County Agricultural Coordinator (CAC) (MOA, 2016). Among the responsibilities of the CAC is the installation and management of agricultural demonstrations. To date, there are no regulations to the types or quality of the demonstrations present, relying on the initiative of the specific CAC (Younn, 2016). However, some demonstration sites are exceptional by regional standards.[11] The Margibi county agricultural center, managed by CAC Musu Younn, boasts 1.8 Ha of cassava and rice demonstration plots including several improved varieties of cassava, swamp rice demonstrations, and contour planting and erosion mitigation demonstrations (Younn, 2016). Ms. Younn also supplies high quality pig, goat, and duck stock to local farmers at cost, an enterprise she has maintained at the county agriculture center since 2014 (Younn, 2016).

A contour planting demonstration at the Margibi County Agriculture Office. Photo by Austin Peterson, 2016

The MOA DRDRE is responsible for annual distributions of improved variety rice seed and distributed 306 MT of rice to 19,504 rural farmers across 10 counties in 2015 (MOA, 2016). However, these data lack useful detail as to the gender, age, or

[11] The author visited the site several times between July and August, 2016.

other demographic information (MOA, 2016). As with other forms of data collection, the MOA is actively pursuing richer data collection protocols (Perry, 2016).

The MOA DRDRE also distributes limited pesticide, fertilizer, and hand tool inputs to the CACs for use or distribution to farmers at the district level. The exact method of distribution however, is determined by the specific CAC (Younn, 2016). The Margibi County CAC, for instance does not distribute pesticides to rural farmers out of concern that the unmarked bottles may be mistaken for alcohol bottles and consumed by rural youths (Younn, 2016). Instead, in cases of pest infestation that warrants spraying, she sends an extension technician to spray (Younn, 2016).

Extension Services and Women Farmers

The Liberian Ministry of Agriculture extension staff recognize the vital role women play in Liberian agriculture and are committed to improving the reach and quality of extension and advisory services to women farmers. The MOA has a gender office that plays an essential role in programming and curricula development to improve services to women and youth farmers (Jallay, 2016). The 2015 Ministry of Agriculture Annual Report estimates that extension services reached 21,410 women farmers in 2015 or 51% of farmers reached (MOA, 2016). However, as there is currently no real time data collection method in place, these numbers are based on aggregated estimates from DOAs and CACs and most likely are not an accurate representation of extension activities (Perry, 2016). One MOA personnel estimate puts the percentage of female farmers reached as low as 20% of total farmers reached, citing household and child care labor demands as the key factors preventing many women farmers from attending farmer field schools or engaging with visiting extension agents (Jallay, 2016). As with general data collection, activities are slated to develop a real time data collection system that will accurately capture gender disaggregated extension activities.[12] Despite the lack of accurate data, the MOA is exploring different strategies for improved gender sensitive extension, including models that leverage the unique opportunities of working with both co-ed and gender-separated farmer groups, trainings that focus on empowering women to see themselves as partners in agricultural decision making, and trainings to women and youth on farm and finance management (Jallay, 2016). MOA personnel are quick to point out that without adequate data collection and supporting research, it will be difficult to fine-tune any gender-responsive approaches (Jallay, 2016; Nypalue, 2016; Perry, 2016).

Agricultural Research and Education Institutions

Liberia has several institutions responsible for research and development of crop varieties, agronomic systems, and extension delivery practices. Each of the institutions is at varying states of reconstruction following the civil conflict and many are still coming back to full capacity after closing down during the Ebola crises.

Booker Washington Institute

The Booker Washington Institute (BWI) is an agricultural vocational institute located in Kakata, Margibi County about one hour north east of Monrovia. The Booker Washington Institute specializes in agronomic research and vocational training to Liberia's next generation of farmers (BWI, 2016).

[12] 2017 MOA Liberia Agriculture Transformation Agenda (LATA) meeting at DRDRE.

Central Agricultural Research Institute

The Central Agricultural Research Institute (CARI) is Liberia's primary agricultural research center, located in Suakoko, Bong County, about two and a half hours north east of Monrovia. CARI, once a branch of the MOA is now an autonomous research institution as of January of 2016 (Kromah, 2016). CARI conducts research into varietal development of rice and cassava, agronomic practices, post-harvest processing, food transformation (particularly for a type of cassava flour known locally as gari), and extension delivery practices (Kromah, 2016).

Cuttington University

Cuttington University (CU) is one of Liberia's largest academic institutions and is located in Gbarnga, Bong County, about two and a half hours north east of Monrovia and only about 15 minutes from CARI. CU houses the College of Agricultural Sciences and is one of the leading Liberian institutions for training the next generation of agricultural researchers, extension agents, and educated farmers. CU is home to a modest, but well equipped lab and research library, and conducts research into rice, cassava, aquaponics, extension, and gender, among other topics (Nypalue, 2016).

Faculty and students assemble an aquaponics system at the Cuttington University College of Agricultural Sciences. Photo by Austin Peterson, 2016

Ministry of Agriculture Department of Technical Services

The Department of Technical Services (DTS) is responsible for providing technical information and support to all agricultural practitioners in Liberia (MOA, 2016). The DTS accumulates, synthesizes, and evaluates technical information for applicability to Liberia's farm conditions and packages them for dissemination through DRDRE (MOA, 2016). The DTS is divided into four divisions responsible for Crop Resources (including tree crops), Livestock, Quarantine, and Fisheries respectively (MOA, 2016).

University of Liberia

The University of Liberia, located at several campuses in and around Monrovia, is one of Liberia's leading higher education institutions and houses the William R. Tolbert College of Agriculture and Forestry. The College of Agriculture offers a bachelor's degree in agronomy and trains undergraduate students in agronomic and extension practices.

William V.S. Tubman University

The William V.S. Tubman University is the only large academic institution in Liberia's south east and offers bachelor's degrees in agriculture and food science with specializations in animal sciences, crop sciences, soil sciences, and applied agriculture (WVTSU, 2016).

USAID Country Development Cooperation Strategy (CDCS) 2013-2017

The central challenge of the USAID/Liberia CDCS is to build leadership, management, and financial capacity with the aim of incrementally reducing Liberia's dependence on external support (USAID, 2013). The stated strategic goal is, "Strengthened Liberian Institutions Positioned to Drive Inclusive Economic Growth and Poverty Reduction." In pursuit of this goal, this CDCS has identified four Development Objectives:

- DO-1: More effective, accountable, and inclusive governance
- DO-2: Sustained, market-driven economic growth to reduce poverty
- DO-3: Improved health status of Liberians
- DO-4: Better educated Liberians

This report will focus on DO-2: Sustained, market-driven economic growth to reduce poverty. This objective contains 3 key indicators for Intermediate Results (IRs) of which this section of the report will focus on IR2.1 and IR2.3:

- IR-2.1: Food Security Enhanced
    - Sub IR 2.1.1 – Nutrition Enhanced
    - Sub IR 2.1.2 – Agricultural Sector Growth Supported
- IR-2.2: Natural Resources Managed Sustainably
- IR-2.3: Enabling Environment Supports Private Enterprise Growth
    - Sub IR 2.3.1 Agricultural Sector Infrastructure Improved and Maintained
    - Sub IR 2.3.2 Improved Economic Policies Implemented

IR-2.1 focusses on both improved nutrition and improvements to agricultural sector growth in line with the Mission's approved Feed the Future Multi-Year Strategy 2011-2015 (USAID, 2013). Key focus areas are on value chain development of rice and cassava, the development and delivery of extension services and agricultural research and development (ARD), and expansion of financial services and lending to micro, small, and medium agricultural enterprises (USAID, 2013). Illustrative Activities for IR-2.1 include:

- Rapid dissemination of improved crop, livestock, and forestry technologies.
- Technical assistance to private sector input suppliers.
- Improved milling and processing technologies for selected crops.
- Adaptive research and dissemination of sustainable and adaptive practices.
- Capacity-building for selected organization, especially those involved in the application of crop research to improve agricultural productivity.
- Business development training and technical assistance.

- Expanded financial service availability for micro, small, and medium enterprises.
- Promotion of dietary diversity and improved child-feeding practices.
- Micronutrient supplementation.

IR2.3 focuses on the physical infrastructure of agriculture and institutional capacity constraints. To expand agricultural value chains, investments will be directed to improve farm-to-market access and to expand rural access to energy. Illustrative Activities for IR-2.3 include:

- Rehabilitation of farm-to-market roads constraining development of key value chains.
- Construction of processing and market infrastructure needed to ensure improved agricultural value chains.
- Technical assistance to expand rural renewable energy supply and enterprise development.
- Support to improved formulation and implementation of economic policies that reduce burdens on micro, small and medium-sized enterprises.
- Technical assistance to enhance abilities of public and private sectors and civil society to develop and implement effective policies.

Recognizing that women comprise over half the agricultural labor force of Liberia, and that women lack equitable access to resources, technology, and market opportunities, DO2 programs will, "focus on the gender aspects of natural resource management and the extraction and commercialization of forest products, explicitly targeting women to increase the numbers of women involved in both community forest management committees and producer groups for agricultural forest products (USAID, 2013)."

Conclusions

INGENAES aims to improve gender and nutrition integration in agricultural extension and advisory services in the Feed the Future Countries. Agriculture is the primary income source for over 70% of the Liberian population, over half of agricultural labor is provided by women, and food insecurity and malnutrition remain a critical threat to wellbeing. Moving forward, the nexus between agriculture, nutrition, and gender equity will need be addressed along with other critical steps toward development if Liberia is going to fully transition out of post-conflict stabilization and into the reconstruction phase.

National Development Imperatives

Several critical areas of development need to be addressed outside of the INGENAES scope to create an enabling environment for real progress toward gender equity and nutrition security:

- **Land Tenure -** Dual land tenure systems remain in place, leading to dispute and conflict over land ownership. Following Liberia's complicated history, the pluralistic land tenure policies that govern urban individual land ownership and rural customary communal land ownership will need to be streamlined so that true and equitable land ownership can be determined and disputes resolved efficiently and permanently.
- **Education -** Education levels and literacy remain low. The GOL is addressing this through an unprecedented public-private partnership, but the move has been contentious and it could take

several decades to learn if it will result in significant increases to popular education, or set the national education level back even further.

- **Infrastructure -** Transportation, energy, and communication technology infrastructure is extremely basic outside of the urban coastal areas and the rainy season renders many farm to market roads impassable for nearly half the year. The GOL backed by international lenders will need to improve critical infrastructure before agricultural activities in the most remote and food insecure regions can reach full capacity.
- **Government** - The GOL faces a difficult situation in which most of the educated elite were either killed or fled the country during the civil war. Many of the remaining educated elite with experience working at an organizational level are attracted to higher paying jobs in both the NGO and private sectors, making it difficult for the government to find qualified personnel. Furthermore, the Liberian government continues to struggle against chronic problems with corruption and lack of transparency. If the GOL is going to provide an enabling environment for a responsive agricultural sector, it will need to improve basic office skills training to ministry personnel and continue efforts to root out governmental corruption.

While the above challenges affect the entire population, there are many national challenges specific to women at the confluence of food, nutrition, and society:

- **Violence Towards Women** – Nearly half of Liberian women have experienced physical violence and nearly 20% of Liberian women have experienced sexual violence. The court system and law enforcement mechanisms are incapable and often lack the will to pursue action against the perpetrators of violence toward women. Until this fundamental perception of the inferiority of women changes, it will be difficult to establish lasting change in the sphere of gender equity.
- **Inequality of Household and Family Responsibilities –** By conservative estimates, women are responsible for more than 50% of agricultural labor in Liberia. Additionally, women are responsible for the vast majority of household labor and child care which competes with time spent on agricultural activities, produce marketing, and rest and leisure time. To quote the Margibi County Agricultural Coordinator Musu Younn, "Women spend more time with the child. When the child is hungry, the woman is hungry. When the child is full, the women is full. So you see that women have cassava patches to feed their children. When the man finds out he has four or five children, he runs away. So how does the woman send her children to school? Through a small patch of cassava" (Younn, 2016).
- **Gendered Land Tenure Inequality** – Land tenure in Liberia is far from clear, and while there are laws preventing gender inequity both in access to land and in inheritance of land, in practice, gender inequality is extreme and pervasive. Women are forced to gain access to agricultural land through highly paternalistic social structures, do not inherit land in equal proportion to male siblings, and do not retain developed land after divorce. With the GOL currently at limited capacity, it is doubtful that it can design or enforce policy that would be effective at changing societal practice. Perhaps other means can be devised to change cultural perception of land tenure practice at the community level.

- **Under-Emphasis of Girls' Education** – Male children are likely to receive five or more years of education than female children in Liberia. The institution and enforcement of compulsory education for all children is likely to be necessary to ensure that girls receive equal education to boys. Furthermore, aggressive legal action against male teachers who violate the rights of female students through force, coercion, or manipulation is likely necessary to ensure that girls are safe and treated with human dignity while in school.
- **Extreme Lack of Dietary Diversity –** The majority of caloric intake for most people in Liberia comes from just two sources – rice and cassava. This is partly due to chronic shortages of garden vegetables, pulses, and animal proteins, particularly during the rainy season. However, cultural preferences for high starch foods and a lack of demand for higher nutrition foods also play a significant role in poor dietary diversity.

Within the INGENAES Scope

Moving forward, the Liberian MOA DRDRE has identified several key action items to focus on in the coming year in order to improve extension services to rural farmers. These action items will need to be addressed through a combination of internal capacity development and external funding and organizational partnership.

- **Improvements to Logistical Resources –** Currently, the MOA does not have the vehicles, fuel, or maintenance capacity in place to support extension activities to any but the most easily accessible agricultural communities.
- **Improved Data Collection –** Current extension activity numbers are calculated from estimates from the DAOs and CACs, and are not derived from real-time data collection. The MOA is taking steps toward developing a real-time data collection system and database that will provide accurate data disaggregated across gender age, crop activities, etc.
- **Fair Share of Extension and Advisory Services** – While very few Liberian farmers have access to AES, of those served, MOA personnel estimate that the majority are male farmers. As the MOA builds its own capacity for extension services, it will need to form new strategies to serve the needs of women farmers based on gender gap research.
- **Training of Extension Agents –** Many of the current extension agents are under educated and lack many necessary skills. Until a new generation of extension agents who have been trained at the university level can be hired, steps need to be taken to train the current cohort of extension agents.
- **Extension Curricula Development –** The MOA in partnership with both FED and MEAS has developed extension curricula to train extension agents and for extension agents to use in community level extension. However, the training curricula has yet to be operationalized. Further development may be required prior to operationalization and fine-tuning may be required after the curricula is piloted.
- **Hiring Women Extension Agents –** The MOA recognizes the importance of gender balance within the body of field extension staff and is actively looking to hire female extension agents as the current cohort begins to time out. These activities can be supported by educational

institutions such as Cuttington University who are prioritizing the recruitment and training of women in the agricultural sciences.

- **Messaging Harmonization –** Within the pluralistic landscape of extension, it is imperative to gain the trust of farmers and ensure the quality and validity of information transfer that the myriad NGOs, IGOs, faith-based organizations, and GOL agencies harmonize agricultural messaging. This will require the greater capacity within MOA to monitor the activities of other organizations and the development of guidance protocols and enforcement mechanisms.
- **Research –** The MOA should be basing decisions whenever possible on research evidence. However, to date, there is little reliable research within the nexus of gender, nutrition, and extension. Quality research in the following areas will be extremely beneficial to the development of MOA strategy and practice development moving forward.
    - **Gender Extension Gap –** The MOA prioritizes gender equitable approaches to extension. However, it is likely that male farmers receive a disproportionate amount of extension service resources. As the MOA improves data collection protocols this gap will likely become more apparent. Research to identify the barriers women farmers face to accessing extension services will be imperative to improving service delivery.
    - **Extension/Adoption Gap –** Similarly to the gender extension gap, there is little data that shows adoption rates of best practices among farmers who have received extension services, but anecdotal evidence from the MOA suggests that adoption rates might be quite low in the majority of counties. Further research needs to be done to better articulate the prevalence of adoption and to identify barriers and catalysts to adoption.
    - **Gendered Use of ICTs –** Information and Communication Technologies show great promise for an extension system that will struggle with funding and personnel constraints for the foreseeable future. However, Gender experts at both MOA and Cuttington University believe that women have much lower access to technology such as cell phones which are usually owned by male heads of household. Research into technology access and ICT delivery to rural women is necessary to develop gender equitable ICT extension platforms.
    - **Perceptions of Information Trustworthiness –** Within the highly pluralistic extension landscape, it is unclear which sources of information rural farmers trust and why. Learning more about how farmers gauge the trustworthiness of the information they receive will assist MOA in developing more effective extension practices.
    - **Farm to Plate –** The typical Liberian diet lacks diversity to the extreme. While many rural households grow garden vegetables, much of the vegetable produce is sold to peri-urban or urban markets. Further research into the types and quantities of vegetables consumed in rural households and the decisions surrounding sale vs. consumption will help MOA develop demand-based nutrition programming.

- **Economic Land Use System Analysis –** Currently, most extension service providers in Liberia focus efforts around improvements to rice production. However, in a transitioning agricultural landscape it is imperative that a comprehensive economic analysis of the suite of potential staple grain, vegetable, livestock, and tree crop land use systems take place. Without sound, smallholder scale economic analysis, even effective extension efforts run the risk of locking smallholder farmers into subsistence level agriculture.

References

Anjali, Duva Mitter. "The Lone Star: The Story of Liberia." *PBS*. PBS, 2002. Web. 27 May 2016. <http://www.pbs.org/wgbh/globalconnections/liberia/essays/history/>.

BWI. "Extension Interview with Booker Washington Institute Faculty." Personal interview conducted by Austin Alcorn Peterson. 20 July 2016.

Cotula, L., Vermeulen, S., Leonard, R. and Keeley, J., 2009, LAND GRAB OR DEVELOPMENT OPPORTUNITY? AGRICULTURAL INVESTMENT AND INTERNATIONAL LAND DEALS IN AFRICA, IIED/FAO/IFAD, London/Rome. ISBN: 978-1-84369-741-1

Cumming-Bruce, N., 2014. "Ebola Epidemic Most Likely Much Larger Than Reported, WHO Says." The New York Times. August 15, 2014. Ebola Deeply. 2015. "Surviving Ebola, Battling Post-Ebola Syndrome."

Department of State - Office of the Historian. "Founding of Liberia, 1847." *Milestones: 1830–1860*. Web. 27 May 2016. <https://history.state.gov/milestones/1830-1860/liberia>.

Dunn-marcos, W. R., Kollehlon, K. T., Ngovo, B., & Russ, E. (2005). Liberians: An Introduction to their History and Culture. *Culture*, (19).

EAT, 2015. USAID, Enabling Agricultural Trade (EAT). *Liberia Market Study for Selected Agricultural Products*. By Fintrac, Inc. N.p.: USAID, n.d. Web. 14 July 2016.

"Education Privatization in Liberia." *Global Initiative for Economic Social and Cultural Rights RSS*. Web. 01 June 2016.

Ellis, Stephen. "Liberia 1989-1994: A Study of Ethnic and Spiritual Violence." *African Affairs* 94.375 (1995): 165-97. Web.

Evans, R. and Griffiths, G., (2013) Palm oil, land rights and ecosystem services in Gbarpolu County, Liberia. Research Note. 3. Walker Institute for Climate System Research, University of Reading, Reading.

FAO. "Liberia - Country Pasture/Forage Resource Profiles." *Liberia*. Web. 26 May 2016. <http://www.fao.org/ag/agp/agpc/doc/counprof/Liberia/liberia.htm>.

FAO. "FAO.org." *FAO Country Profiles: Liberia*. Web. 27 May 2016. <http://www.fao.org/countryprofiles/index/en/?iso3=LBR>.

Gifford, Paul. 2002. Christianity and Politics in Doe's Liberia. Cambridge: Cambridge University Press.

GOLMoA. "The Ministry of Agriculture." *The Ministry of Agriculture*. N.p., n.d. Web. 08 June 2016. http://www.moa.gov.lr/

GFRAS. "Liberia." *GFRAS*. Global Forum on Rural Advisory Services, n.d. Web. 09 June 2016.

Human Rights Watch. "Shocking War Crimes in Sierra Leone." *Human Rights Watch*. 1999. Web. 28 May 2016. <https://www.hrw.org/news/1999/06/24/shocking-war-crimes-sierra-leone>.

Jallay, Cleopatra, Planning Officer for Gender Office - Liberian Ministry of Agriculture. "Extension Agent Interview." Personal interview conducted by Austin Alcorn Peterson. 3 Aug. 2016.

Johnson, Mahmud. "J-Palm Liberia: Impact on Rural Women Farmers." Personal interview conducted by Austin Alcorn Peterson. 13 July 2016. See J-Palm Liberia's Web Site at the following address: http://www.jpalmliberia.com/

Kieh, George Klay, Jr. "Neo-Colonialism: American Foreign Policy and the First Liberian Civil War." *The Journal of Pan African Studies* 5.1 (2012): 164-84. Web. 19 Aug. 2016.

Konneh, Augustine., 1996. Citizenship at the Margins: Status, Ambiguity, and the Mandingo of Liberia. African Studies Review, 39, pp 141-154. doi:10.2307/525439.

Kromah, Abibatu. "Extension and Gender Interview." Personal interview conducted by Austin Alcorn Peterson. 21 July 2016.

LATA. "Liberia Agricultural Transformation Agenda Farmer E-Registration Dashboard." *Liberia Agriculture Transformation Agenda*. GOL Ministry of Agriculture, 13 Sept. 2016. Web. 13 Sept. 2016.

Larbi, Asamoah. *Country Pasture/Forage Resource Profiles: Liberia*. Rep. FAO, July 2012. Web. 30 May 2016. <http://www.fao.org/ag/agp/agpc/doc/counprof/Liberia/liberia.htm>.

Liberia Anti-Corruption Commission (LACC). *2014/2015 Annual Report*. Oldest Congo Town: LACC, 2015. *Www.lacc.gov.lr*. Web. 22 Aug. 2016.

Liberia Institute of Statistics and Geo-Information Services, Ministry of Health and Social Welfare, National AIDS Control Program, and MEASURE DHS, ICF INTERNATIONAL. *Liberia Demographic and Health Survey 2013*. Rep. Monrovia, 2013. Print.

"Liberia Map Black and White." *Maps Open Source*. Web. 28 May 2016. <http://www.mapsopensource.com/liberia-map-black-and-white.html>.

Lomax, T. (2015) Asserting community land rights using RSPO complaint procedures in Indonesia and Liberia. IIED, London.

MacDonald, A. M., Bonsor, H. C., Dochartaigh, B. É. Ó., & Taylor, R. G. (2012). Quantitative maps of groundwater resources in Africa. *Environmental Research Letters*, *7*(2), 024009. http://doi.org/10.1088/1748-9326/7/2/024009

McNamara, Paul, Burton E. Swanson, and Brent M. Simpson. *Rebuilding and Strengthening the Pluralistic Extension System in Liberia: Report on the MEAS Rapid Scoping Mission*. Rep. MEAS: Modernizing Extension and Advisory Services, 18 Mar. 2011. Web. 8 June 2016.

Melorose, J., Perroy, R., & Careas, S. (2016). Liberia Bellmon Update: February 2, 2016. *Statewide Agricultural Land Use Baseline 2015*, *1*(1), 1–3. http://doi.org/10.1017/CBO9781107415324.004

MOA. Liberia. Ministry of Agriculture. *Http://www.moa.gov.lr*. By Ministry of Agriculture - Liberia. Government of Liberia, July 2016. Web. Aug. 2016. http://www.moa.gov.lr/doc/2015%20MOA%20Annual%20Report.pdf

Murphy, Emmet; Erickson, Kali; and Tubman, Macon. 2016. USAAID Office of Food for Peace Food Security Desk Review for Liberia, 2016-2020. Washington, DC: FHI 360/FANTA.

Musinamwana, K. C. E. (2014). Leaving a Trace: A Report on the Potential Economic Impacts of Mining in Liberia, *53*(9), 1689–1699. http://doi.org/10.1017/CBO9781107415324.004

Namubiru-Mwaura, Evelyn L., Anna Knox, and Ailey Kaiser Hughes. *Land Policy and Institutional Support (LPIS) Project: Customary Land Tenure in Liberia: Findings and Implications Drawn from 11 Case Studies*. Rep. USAID/Liberia, Feb. 2012. Web. 3 June 2016.

Nyenswah, Tolbert, Francis Kateh, Luke Bawo, Moses Massaquoi, Miatta Gbanyan, Mosoka Fallah, Thomas K. Nagbe, Kollie K. Karsor, C. Sanford Wesseh, Sonpon Sieh, Alex Gasasira, Peter Graaff, Lisa Hensley, Hans Rosling, Terrence Lo, Satish K. Pillai, Neil Gupta, Joel M. Montgomery, Ray L. Ransom, Desmond Williams, A. Scott Laney, Kim A. Libeblade, Laurence Slutsker, Jana L. Telfer, Athalia Christie, Frank Mahoney, and Kevin M. De Cock. "*Ebola and Its Control in Liberia, 2014–2015 - Volume 22, Number 2- February 2016 - Emerging Infectious Disease Journal – CDC"*. Centers for Disease Control and Prevention (CDC), Feb. 2016. Web. 28 May 2016. <http://wwwnc.cdc.gov/eid/article/22/2/15-1456_article>.

Nyaplue, Caroline, Extension and Gender Faculty at Cuttington University College of Agriculture. "Extension and Gender Interview." Personal interview conducted by Austin Alcorn Peterson. 21 July 2016.

Paterson, Philip. "Liberia: Conflict Profile." *Insight on Conflict*. Feb. 2014. Web. 28 May 2016. <http://www.insightonconflict.org/conflicts/liberia/conflict-profile/>.

Perry, Edward, Director of Extension - Liberian Ministry of Agriculture. "Extension Agent Interview." Personal interview conducted by Austin Alcorn Peterson. 3 Aug. 2016.

Syed, Sehr. "Interview with Sehr Syed - Adviser to Liberian Statistics and Geo-Information Services." Personal interview. Summer 2016. Interview conducted by Austin Alcorn Peterson

Tamu, Abibu. *WFP - Liberia: June 2015: Emergency Food Security Assessment*. Rep. June 2015. Web. 30 May 2016. <http://documents.wfp.org/stellent/groups/public/documents/ena/wfp276922.pdf>.

Transparency International, "Corruption Perceptions Index 2015." Transparency International. N.p., n.d. Web. 22 Aug. 2016. < http://www.transparency.org/cpi2015>

"UN Rights Expert Urges Liberia Not to Hand Public Education over to a Private Company." *UN Rights Expert Urges Liberia Not to Hand Public Education over to a Private Company*. 22 Mar. 2016. Web. 01 June 2016. <http://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=18506>.

UNDP. "Human Development Indicators." *United Nations Development Programme - Human Development Reports*. 2015. Web. 28 May 2016. <http://hdr.undp.org/en/countries/profiles/LBR>.

UNDP. *Work for Human Development: Briefing Note for Countries on the 2015 Human Development Report - Liberia*. 2015. Web. 5 May 2016. <http://hdr.undp.org/sites/all/themes/hdr_theme/country-notes/LBR.pdf>.

"UNMIL Facts and Figures - United Nations Mission in Liberia." *UN News Center*. UN, n.d. Web. 19 Aug. 2016.

UN Women. "Liberia." *UN Women West Africa Regional Office WARO*. N.p., n.d. Web. 10 June 2016.

USAID. *Country Development Cooperation Strategy: Liberia 2013-2017*. Rep. USAID, 2013. Web. 8 June 2016.

USAID. *Country Profile: Property Rights and Resource Governance: Liberia*. Rep. USAID, 2010. Web. 3 June 2016. <http://www.usaidlandtenure.net/sites/default/files/country-profiles/full-reports/USAID_Land_Tenure_Liberia_Profile.pdf>.

USAID. "Liberia: Nutrition Profile." *U.S. Agency for International Development*. 8 Feb. 2016. Web. 28 May 2016. <https://www.usaid.gov/what-we-do/global-health/nutrition/countries/liberia-nutrition-profile>.

WFP. "Liberia | WFP | United Nations World Food Programme - Fighting Hunger Worldwide." Web. 27 May 2016. <http://www.wfp.org/countries/liberia>.

WHO. "Liberia." *World Health Organization*. Web. 27 May 2016. <http://www.who.int/countries/lbr/en/>.

World Bank. "Climate Change Knowledge Portal 2.0." *Climate Change Knowledge Portal 2.0*. Web. 26 May 2016. <http://sdwebx.worldbank.org/climateportal/index.cfm?page=country_historical_climate>.

World Bank. "Liberia." *Data*. Web. 27 May 2016. <http://data.worldbank.org/country/liberia>.

World Bank. "Liberia." *Data-Beta*. Web. 27 May 2016. <http://beta.data.worldbank.org/country/liberia>.

World Bank. "Population Growth (annual %)." *Data*. Web. 27 May 2016. <http://data.worldbank.org/indicator/SP.POP.GROW/countries/LR?display=graph>.

World Bank. *Poverty and the Policy Response to the Economic Crisis in Liberia*. By Quentin Wodon. Washington, D.C.: World Bank, 2012. Web. 25 Aug. 2016.

World Bank Gender and Development Group (PRMGE), and Ministry of Gender and Development of Liberia (MOGD). *Liberia: Gender-Aware Programs and Women's Roles in Agricultural Value Chains - A Policy Memorandum*. Rep. World Bank's Gender and Development Group, May 2010. Web. 10 June 2016.

WVSTU. "William V.S. Tubman University." *William V.S. Tubman University*. N.p., n.d. Web. 27 July 2016. http://www.tubmanu.edu.lr/

Younn, Musu, County Agricultural Coordinator, Margibi County - Liberian Ministry of Agriculture. "Extension Agent Interview." Personal interview conducted by Austin Alcorn Peterson. 17, Jul. 2016.

Appendix A: Active Feed the Future Projects in Liberia Funded by the U.S. Government

Information reproduced from respective project websites linked below

Enabling Agricultural Trade (EAT)

Links: www.eatproject.org

Who:

The US Agency for International Development - Enabling Agricultural Trade (EAT) project promotes **inclusive agricultural sector growth** - a key component of the US Government's Feed the Future initiative - by creating enabling environments for agribusinesses that encourage private sector investment and promote food security.

What:

- **Actionable analysis** that assists US government agencies, policymakers, and the broader development community to understand and effect change to the agribusiness enabling environment (AgBEE).
- **Technical assistance** and support to any US government agency or local institution working to strengthen agricultural policy and the agribusiness enabling environment.
- **Thought leadership** and collaboration among the development community to build awareness of the importance of how business environment reforms catalyze agricultural sector growth.

Why:

The regulatory burdens faced by agribusinesses, from farmers to processors to exporters, constrain their productivity and growth. The EAT project helps donors and policymakers better identify these constraints and act on them through concrete, practical recommendations that improve the efficiency of the agricultural sector. Our work makes it easier for actors along agricultural value chains to operate as a business - from smallholders, to even the largest agribusinesses - by reducing the transaction costs of essential business functions.

EAT focuses on the rules of the game – that is, the policies, laws, regulations, and institutions that encourage certain types of market behavior and discourage others. Market-distorting policies and weak institutions inhibit the efficient operation of the agricultural sector and represent critical barriers to economic growth. Ultimately, a more efficient enabling environment can improve economic growth, reduce poverty, and increase food security.

Farmer to Farmer Program (F2F)

Links: http://farmer-to-farmer.org/

About:

The Farmer-to-Farmer (F2F) Program promotes sustainable economic growth, food security and agricultural development worldwide. Volunteer technical assistance from US farmers, agribusinesses, cooperatives, and universities helps developing countries improve productivity, access new markets, build local capacity, combat climate change and conserve environmental and natural resources.

F2F volunteers work with farmers, producer groups, rural businesses and service providers to develop local capacity necessary to increase food production and rural incomes, expand economic growth, and address environmental and natural resource management challenges. This people-to-people exchange promotes international goodwill, understanding of US foreign assistance programs and private involvement in development activities.

Program Strengths:

- Quality, cost effective technical assistance from practical, experienced specialists
- Capacity development and technology transfer in focused value chain or sector support area
- Citizen diplomacy that establishes long term relations, promotes goodwill, and raises understanding of international development issues.

The F2FProgram is funded by the US Agency for International Development(link is external) through the US Farm Bill to assist developing countries, middle-income countries, emerging markets, sub-Saharan African countries, and Caribbean Basin countries to increase farm production and incomes.

Project Areas in Liberia:

F2F Liberia works in three key project areas of livestock (including aquaculture), horticulture, and youth in agribusiness.

Project Objectives

- Support equitable growth in the horticulture sector with more sustainable markets
- Improve Liberians' nutritional status
- Increase incomes for smallholder livestock farmers and associated industry actors
- Increase use of innovative farming methods and build market opportunities by and for youth

Project Activities and Approaches

- Develop management capacity of local organizations, increase productivity of beneficiary farmers, and improve product quality for consumers
- Build the capacity of young people to enter into an agricultural livelihood and develop value-added activities in horticulture, livestock, and agricultural support services
- Provide training on adoptable techniques in animal husbandry, animal health and nutrition, improved processing, financial management, production, and organizational capacity building

Anticipated/Achieved Project Results

- Field at least 57 volunteers in Liberia
- At least 2,851 individuals will directly benefit from volunteer technical assistance; 1,397 of these will be women

Food and Enterprise Development Program (FED)

Links: http://dai.com/our-work/projects/liberia%E2%80%94food-and-enterprise-development-program-fed

What: Half of all Liberians generate their income through agriculture, yet agriculture is not seen as a business by the vast majority of Liberian farmers. Using an approach tailored to specific conditions and locations, this project is helping Liberia achieve food security—in terms of food availability, utilization, and affordability—by building incentive structures that assist local stakeholders to adopt a commercial approach.

Our market-led and value chain-driven methodology builds indigenous capacity, and focuses on benefiting Liberia's women and youth. New market linkages are catalyzing income and job growth and increases in the production, processing, marketing, and nutritional utilization of rice, cassava, and vegetables in Bong, Lofa, Nimba, Grand Bassa,

Montserrado, and Margibi counties, a region targeted as a development corridor that fosters commerce, simultaneously improving food availability and access and dietary diversity.

FED is Africa's largest project under President Barack Obama's Feed the Future Initiative, which promotes a move away from subsistence and increasing food security by working with public and private bodies, including the Government of Liberia, the private sector, local nongovernmental groups, and other key stakeholders.

Sample Activities

- Develop and disseminate improved technologies for agricultural productivity and profitability. Expand and modernize the input supply and extension systems.
- Improve commercial marketing and food processing.
- Bolster Liberian organizations that support business and farming.
- Develop skills of agriculture-related workforce.
- Launch a Market Development Fund to build Liberian capacity without compromising market development.

Select Results

- Piloted productivity enhancing technologies, including treadle pumps, tube wells, power-tillers, rice de-hullers, and application of Urea Deep Placement.
- Developed extension manuals and brochures used by hundreds of farmers.
- Provided technical training in agriculture best practices for 18,646 farmers.
- Training has led to more than 14,000 farmers applying improved technologies in more than 2,634 hectares.
- Provided 224 interns with life-changing work experience across 54 Liberian businesses.
- Engaged 1,138 youth through the "Back to the School Garden" initiative to get youth involved in agricultural best practices.
- Trained 164 women in food processing and preservation skills so they can jump-start their own businesses.
- Generated private sector investment of $422,600 in rice seed production, vegetable seedling, and goat shelters.
- Provided 435 textbooks to four educational institutions, benefitting nearly 3,000 students and instructors.
- Forty-five percent of FED's beneficiaries are youth (ages 16 to 35), while 48 percent are women.
- Played a crucial role in the development of Liberia's first National Agriculture Diploma Curriculum, which was tested in key vocational institutions. A total of 2,861 students and instructors benefited from FED's assistance, including establishment of demonstration farms, provision of textbooks and training aimed at improving the quality of instruction.

Food for Peace (FFP)

Link: https://www.usaid.gov/what-we-do/agriculture-and-food-security/food-assistance

What: USAID's food assistance efforts are an expression of the compassion and goodwill of the people of the United States. The lifesaving assistance we provide can also help to stabilize fragile situations.

Our emergency food assistance and multi-year development programs:

- Monitor food insecurity throughout the world;
- Save lives in times of crisis;
- Tackle chronic undernutrition; and
- Help the most vulnerable break the cycle of poverty and hunger through agriculture and livelihoods support.

Many development food aid programs target disaster-prone areas and are designed to help reduce the need for emergency assistance over time.

Food Assistance in Action:

- Changes in the Agricultural Act of 2014 mean new flexibilities for Food for Peace. To see how Food for Peace has incorporated these changes to Section 202(e) resources in its programming,**read these stories**.
- USAID has been the largest provider of food assistance to the Ebola-affected region in West Africa since the beginning of the outbreak in 2014. FFP is addressing the urgent food needs of persons directly affected by Ebola and those impacted by the secondary, economic impacts of Ebola using a mix of targeted cash assistance, food vouchers, and U.S. and locally and regionally procured food assistance. **Learn more about FFP's Ebola response here.**
- Last year, assistance from the United States and other donors contributed to averting a famine in South Sudan. **Click here to read an update from FFP Office Director Dina Esposito on our current efforts to fight hunger in South Sudan**.
- The United States is currently the largest donor of food assistance to Syria. USAID-funded programs help feed millions of refugees and internally displaced persons affected by the crisis in and around Syria. USAID works with the UN World Food Program (WFP) and other partners to most effectively deliver this lifesaving aid. **Click here to see how WFP is transporting life-sustaining food bars purchased in the U.S. to Syrian refugees in Erbil, Iraq(link is external)**. Or **click here to see more on a U.S.-funded food voucher program for Syrian refugees in Turkey(link is external)**.
- Programs such as **this one in Malawi(link is external)** have helped farmers form marketing clusters to attract bulk buyers and bargain for better produce prices. Increased profits mean farmers can now invest in their farms, and has led to increased financial security for families.
- In Guatemala, USAID and Save the Children are fighting malnutrition and stunting in children by educating mothers on the importance of proper nutrition and growth monitoring during the first 1,000 days of a child's life. Watch this video to see the program in action:**Getting to the Root of Malnutrition in Guatemala(link is external)**
- Yemen, a nation plagued by conflict and poverty, currently ranks as the 7th most food-insecure country in the world. Nearly 42% of the population is considered food insecure and 47% of its children under 5 are stunted. Since the start of FY 2013, USAID has contributed over $61 million of life-supporting food assistance to WFP in Yemen. To see how USAID and WFP work together to combat food insecurity, **click on this video.(link is external)**

We are providing more effective food assistance:

- Building on the latest in nutrition science, our in-kind food products are being reformulated and new products are being added to better meet the nutritional needs of vulnerable populations around the world.
- USAID has adopted a state-of-the-art supply-chain management system that allows us to preposition food strategically, significantly reducing the amount of time it takes to reach people in need.
- Since 2010, in-kind foods are now complemented by a cash-based emergency food security program that allows USAID to buy some food locally and regionally. The cash program also allows USAID to support interventions that enable hungry people to access local markets.
- These tools are directed with the help of a state-of-the-art early-warning system that applies remote monitoring techniques with in-country data gathering and analysis in key food insecure locations. Today the USAID funded Famine Early Warning System (FEWS) is one of the most highly regarded early-warning systems in the world.

Food Aid Reform Proposal:

See the latest FY 2016 food aid reform proposal by **clicking here**.

FFP Assistance Programs in Liberia:

- The Office of Food for Peace (FFP), in partnership with the UN World Food Program (WFP), ACDI/VOCA, Mercy Corps, Project Concern International (PCI) Save the Children and UNICEF, is providing much needed food assistance to individuals, households, and communities directly affected by the Ebola epidemic. This assistance, provided through a mix of in-kind assistance, local and regional procurement, cash transfers, and agricultural input vouchers, is boosting food access, household purchasing power and market recovery. In addition, FFP and WFP will continue to support Ivoirian refugees and host families in the eastern border areas with Cote d'Ivoire through direct food assistance and livelihoods support while their repatriation to Cote d'Ivoire continues.
- FFP is investing in the capacity of vulnerable households in Bong and Nimba counties through a development project with partner ACDI/VOCA. The project, worth approximately $40 million, aims to reduce chronic malnutrition, improve agricultural productivity and natural resource management, promote expanded livelihoods opportunities and increase rural access to health care and financial services.

Global Agriculture and Food Security Program (GAFSP)

Link: http://www.gafspfund.org/content/liberia

What: $46.5 million for the Smallholder Agricultural Productivity Enhancement and Commercialization Project (SAPEC) to enhance the income of smallholder farmers, particularly women and youth, through sustainable land expansion and land improvement, increased market access, and strengthening institutional capacities.

GAFSP financing in Liberia will support the implementation of sustainable medium and long-term investments in agriculture guided by the Liberia Agriculture Sector Investment Program (LASIP). From 1989 to 2003 Liberia was riddled with prolonged conflicts that devastated the country's institutional and human capacities, displaced farming communities, and damaged transport and processing infrastructures.

By supporting LASIP, GAFSP funds enables Liberia to rebuild and maximize the agricultural sector's contributions to economic growth, employment and income generation, food and nutrition security, and overall poverty

reduction. The program increases the income of smallholder farmers, particularly women and youth, through irrigation expansion, land husbandry improvements, and improvement of market access.

- Sustainable land expansion

GAFSP funding supports the expansion of irrigation and improvement of land husbandry in order to increase food production and income generation. The program includes the development of a strategic irrigation investment plans, the construction of small-scale irrigation schemes, and other key activities for increased crop production, such as access to seeds and cuttings, plant nutrients, fertilizers, and pest management.

- Increased market access

In the project areas, at least 40% of crops are lost during post-harvest activities. GAFSP funding supports efforts to address this issue by increasing feeder roads, storage facilities, modern marketplaces, and processing equipment.

- Strengthening institutional capacities

GAFSP funding is used to support sector development, strengthen farmer-based organizations, establish an accountable and transparent system, and expand the capacities of Liberia's key agricultural institutions. It also contributes to the rehabilitation and modernization of the country's adaptive agricultural research services, which will enable farmers to be involved in implementing trials and analyzing findings and results.

Health, Agriculture, and Food Security Program (HANDS)

Link: http://oici.org/programs/health-agriculture-and-nutrition-development-for-sustainability/

What: OIC International's Health, Agriculture and Nutrition Development for Sustainability Program (HANDS), aims to eliminate the current food gap and nutritional deficit in two of the most food insecure counties of Liberia: Grand Geddeh and River Ghee. Through the distribution of soy flour and soy beans, OIC International's initiative will benefit over half a million Liberians over the next 5 years.

The ultimate goal of HANDS, however, is not only to help Liberians. Rather, our program strives to help Liberians help themselves. Through technical and vocational training, and entrepreneurship and business development, OICI's HANDS project aims to develop Liberia's workforce. Attention to Food and Agricultural Security, Developing Finance, and Health, Nutrition, and HIV/AIDS education, the initiative seeks to enhance the livelihood of Liberians. These combined efforts are a move toward the ultimate goal: Healthy, Self-Reliant Communities.

To address the chronic and acute malnutrition problems of targeted populations in Grand Gedeh and River Gee counties of Liberia, OICI has introduced the production of a new, innovative fortified cereal, *Super Gari*, using locally sourced through the HANDS program.

Super Gari is a fortified cereal made of three ingredients: *gari*, defatted soy flour, and micronutrient mix. Through the HANDS program, OICI produces *Super Gari* to provide food rations to program beneficiaries, train beneficiaries in a new skill, bolster the local cassava value chain, and promote the development and marketing of a local value-added food product. In addition, as part of the HANDS program, OICI teaches improved agricultural techniques for cassava farming to beneficiary farmers on program demonstration farms. In addition to linking them to local markets, the HANDS program purchases cassava from the farmers for use in *Super Gari* production.

To achieve these goals, OIC International is partnering with LOIC, WISHH (World Initiative for Soy in Human Health), Malnutrition Matters: Food Technology Solutions, and Shelter For Life International.

Together with our partners, we recognize that a specific plan is necessary to accomplish our long-term goal of eliminating the current food gap and nutritional deficit in Liberia. Here's our strategy:

- Implement agricultural, agro-processing and entrepreneurship training
- Develop and distribute fortified cassava blended cereals
- Build and rehabilitate community infrastructure
- Promote better feeding and care practices to mothers and children
- Implement school snack program and take-home rations for girls

Through these measures we expect to **increase food availability and food access, improve food utilization, and expand opportunities for education**. Together, these ends make up the final expected result of OIC International's **Health, Agriculture and Nutrition Development for Sustainability**: Development of programs ensuring good Health, productive Agriculture, and positive Nutrition habits – programs that Liberians can Sustain with their own HANDS.

Liberian Agricultural Upgrading, Nutrition, and Child Health (LAUNCH)

Link: http://acdivoca.org/our-programs/project-profiles/liberia-liberian-agricultural-upgrading-nutrition-and-child-health

What:

AN INTEGRATED APPROACH TO IMPROVING FOOD SECURITY

In June 2010, USAID's Office of Food for Peace awarded ACDI/VOCA a five-year, $40 million Title II multiyear assistance program in Liberia. The program, which is called Liberian Agricultural Upgrading, Nutrition, and Child Health (LAUNCH), aims to reduce food insecurity among vulnerable rural populations. ACDI/VOCA implements LAUNCH together with Project Concern International, John Snow Inc., and Making Cents International. To date, ACDI/VOCA has shipped 30,015 MT of food commodities to Liberia to support program objectives through both monetization and direct distribution. ACDI/VOCA expects to ship an additional 1,570 MT of food aid over the remaining project years.

Increasing Availability of and Access to Food

ACDI/VOCA trains Liberian farmers on how to use environmentally sustainable production techniques, improve post-harvest practices, integrate cash crops into smallholder production systems, increase access to savings and credit, and develop business skills. Working through farmer associations, LAUNCH will build the technical, management and business skills of approximately 10,800 farmers. To date, LAUNCH has established 260 farmer groups and reached more than 7,000 individual farmers, of whom more than half are women. LAUNCH also works with women's poultry groups in Bong and Nimba.

LAUNCH is using a value chain approach to help farmers identify market opportunities and address constraints. The program targets commodity value chains such as rice, horticulture, and poultry. It also works with private sector businesses and formal financial institutions to implement market-oriented strategies to increase beneficiary access to products, services, and markets.

Reducing Chronic Malnutrition of Vulnerable Women and Children

The health and nutrition strategy focuses on the prevention of malnutrition, the early identification and treatment of acute malnutrition, and the promotion of high-impact health and nutrition interventions at the household, community, and facility levels. Households receiving supplementary food rations are included in the agriculture and livelihoods activities; the ration is designed to reduce malnutrition without creating dependency or undermining markets. To date, LAUNCH identified 48 food distribution points and registered over 20,000 pregnant or lactating women and children under the age of 2. Over the life of the program, LAUNCH's supplementary food rations will

reach 10,281 pregnant or lactating women, 16,770 children under 2 years of age, and 81,749 other family members. Direct distribution of 7,700 MT of corn-soy blend packets, bulgur wheat, yellow peas, and vegetable oil will also help mothers care for the health and nutrition of their families.

Increasing Access to Education

LAUNCH increases opportunities for youth by developing community capacity to support education and increasing access to livelihoods education that enhances their employability.

LAUNCH helps develop youth "agroentrepreneurs"—individuals who adopt a commercially oriented approach to agriculture and small business/microenterprise development. The agroentrepreneurs are trained in basic business skills such as analyzing business trends, understanding value chains, and identifying opportunities to add value to goods or services. Graduates of these trainings are eligible for microgrants to help them start small farming operations, microenterprises or other complementary, rural-based business activities, such as providing inputs and services to farmers.

LAUNCH also works to build capacity in local schools. LAUNCH holds trainings for school principals to address communication, work planning, and ways to monitor teachers' classroom performance. LAUNCH also works with school administrators and parent-teacher association (PTA) members to promote increased parent engagement in education and assess school performance. When communities identify a specific, appropriate improvement project and agree to provide labor and materials, LAUNCH provides minigrants that can be used to fill any material gaps that the community cannot afford.

For more information, contact Stephan Guertin at sguertin@acdivoca.org.

Millennium Challenge Corporation Liberia Threshold Program

Link: https://www.mcc.gov/where-we-work/program/liberia-threshold-program

What: MCC and the Government of Liberia signed a $15 million threshold program grant agreement on July 6, 2010 that will focus on improving land rights and access, increasing girls' primary education enrollment and retention, and improving Liberia's trade policy and practices.

Implementing Partner
The United States Agency for International Development (USAID) oversees implementation of the program on behalf of MCC.

Improve Girl's Access to Primary Education

Liberia faces several constraints to improving its primary education system. Although primary education is compulsory and entrance is free, the cost of materials and uniforms makes schooling unaffordable for many parents. Component 2 of the program will help increase girls' primary education enrollment and retention in the three communities with the largest number of out-of-school girls. The program will provide over 7,000 scholarships to girls to cover the additional costs required to attend primary school. In addition to the scholarships, mentoring and counseling programs will promote awareness of health issues, including malaria, HIV/AIDS, nutrition, and sanitation, and will provide free or inexpensive medical treatment. Several target communities will also receive performance-based grants to improve the school environment (specific activities to be financed through these grants will be informed by a needs assessment and community consultations to be undertaken by the United States Agency for International Development). Finally, the program will support a sensitization campaign to educate parents and communities on the benefits of sending girls to school and to reduce resistance to girls' schooling.

Project Goals

- Provide scholarships to 2,350 girls each year in three counties - Bong, Grand Bassa, and Lofa. Each scholarship will cover the basic costs of uniforms, books, cost of transportation, and other similar items that make it possible for students to attend school.
- Provide social interventions such as counseling and mentoring programs and launch sensitization campaigns targeted at teachers, school administrators, parents, and the community to help create an environment supportive of girls' education in order to improve retention.
- Provide performance-based grants to 30 targeted schools over three years to improve the school environment, including renovations of roofs/classrooms, construction of latrines, water pumps, provision of classroom furnishings, and other items identified through a needs assessment and community consultations.

Improve Trade Freedom

Liberia has the twelfth highest weighted average tariff rate in the world and the second highest in West Africa. In addition, import bans and restrictions, inadequate trade capacity, minimal enforcement of intellectual property rights, poor infrastructure and licensing, and corruption add to the cost of trade. Component 3 of the program will support Liberia's efforts to improve trade policy and practices, and will complement other donor efforts in this area. The program will support tariff harmonization by providing training to Liberian officials and by launching a multimedia campaign to improve knowledge and awareness of these reforms. The program will also support efforts to reduce non-tariff trade barriers through increased knowledge of and engagement with regional and global organizations, and by improving the regulatory environment. With the passage of a new customs code, will update regulations, inform the public of new changes, and train relevant stakeholders. Finally, the program will support protection of intellectual property rights, including legislation amendments and trainings.

Project Goals

- Raise awareness and support implementation of tariff harmonization.
- Strengthen Liberia's trade policy by increasing conformity with international standards.
- Modernize Liberia's customs practices to increase transparency and quality and improve compliance with existing legislation.
- Strengthen efforts to protect intellectual property rights.

Strengthen Land Rights and Access

Liberia has a dual land tenure system of formal and customary land tenure. The two separate land tenure systems, poor records management, and a lack of reliable land information systems have caused legal disputes, social conflicts, unequal land access, and significant property registration constraints, which hinder domestic and international investment in Liberia.

Component 1 of Liberia's threshold program is designed to provide the foundation for reforms in land policy and legislation to promote equal land access and increased land security. It will support studies of Liberia's customary land tenure to better understand existing rules and institutions, including women's land access. In addition, studies of the formal legal framework will be conducted to provide the information needed for legislative reform of the property rights system. Support also will be provided to help rebuild Liberia's technical capacity in land administration and surveying. Finally, the program will rebuild the deed registry system and improve its capacity and procedures, including the management and storage of land records to increase the efficiency of land administration and land transfers.

Project Goals

- Increase clarity and public understanding of property rights issues in order to help the National Land Commission to develop a comprehensive reform strategy for land policy and law.
- Rebuild and restore public confidence in the system of land administration through reforms of management, improved procedures, and rebuilding of public and private surveying capacity.
- Improve management of land records and increase efficiency in registration of land transfers and land market operations by the National Center for Documentation and Records/Archives.

Modernizing Extension and Advisory Services (MEAS)

Link: http://www.meas-extension.org/

What: Extension systems in Africa, Asia, the Middle East, Eastern Europe, and Central America need to undergo significant change if they are to effectively serve the food security and economic development needs of resource-poor men and women farmers. New approaches must draw on full breadth of resources in public, private and civil society organizations and utilized available advanced information and communications technologies. MEAS is a Center of Excellence that seeks to promote and support such endeavors.

The MEAS project is made up of three components expected to benefit a wide audience of users:

1 TEACH - Disseminating Modern Approaches to Extension through user-friendly materials for dissemination and training programs that promote new strategies and approaches to rural extension and advisory service delivery. Click here for a brochure on this component.
2 LEARN - Documenting Lessons Learned and Good Practice through success stories, case studies, evaluations, pilot projects, and action research.
3 APPLY - Designing Modern Extension and Advisory Services Program through assistance to selected host country organizations – public and private – for the analysis, design, evaluation and reform of rural extension and advisory services.

Liberia Project: MEAS (Modernizing Extension and Advisory Services – a USAID funded project) conducted a scoping mission to examine the pluralistic extension system in Liberia and to develop recommendations for strengthening this extension system.

The assessment work in the field occurred from March 6-18, 2011 and included in-depth interviews with Ministry of Agriculture (MOA) staff, agricultural extension officers and workers, international and national non-governmental organization (NGO) directors, lead farmers, university faculty, agricultural researchers and private sector representatives.

The MEAS team also visited farms, County extension offices, as well as universities and training centers.

The mission aimed to identify the key issues within the pluralistic extension system in Liberia that will need to be addressed in order to develop a sustainable, farmer-led and market driven system of extension and advisory services. In addition, the mission identified specific recommended actions for consideration by the MOA and for possible future funding by USAID.

People, Rules, and Organizations Supporting the Protection of Ecosystem Resources (PROSPER)

Link: http://acdivoca.org/our-programs/project-profiles/liberia-people-rules-and-organizations-supporting-protection-ecosystem

What: Liberia benefits from a nationwide movement providing for the sustainable and beneficial use of its forest resources, among the most treasured in Africa. In the past, "blood timber" helped fuel the country's long-running

communal discord, but now forest and other natural resources are playing an important role in recovery, community stability, and economic growth. To build on previous investments in the forestry and agricultural sectors, particularly the Land Rights and Community Forestry Program (2007-2011) and the Liberia Forestry Support Program (2011-2012), USAID contracted Tetra Tech ARD in May 2012 to implement the five-year People, Rules, and Organizations Supporting the Protection of Ecosystem Resources (PROSPER) project. ACDI/VOCA manages the third objective of the project, "Livelihood and Enterprise Development," by enhancing livelihoods through improved agriculture and sustainable harvesting of non-timber forest products.

Objectives

- Expand educational and institutional capacity to improve environmental awareness, natural resource management, biodiversity conservation, and environmental compliance
- Improve community-based forest management leading to more sustainable practices and reduced threats to biodiversity in target areas
- Enhance community-based livelihoods derived from sustainable forest-based and agriculture-based enterprises in target areas

Activities and Approaches

- Increase the number of sustainable agro/forest-based enterprises by supporting the harvest of sustainable non-timber forest products, assisting the development of wood-based enterprises, and fostering cassava-processing and oil palm-based enterprises
- Reduce threats to biodiversity linked to livelihood activities by increasing awareness of shifting cultivation and educating about the benefits of community forests through farmer field schools, supporting planting and rehabilitation of cocoa crops, promoting crop diversification activities, and raising awareness of bushmeat alternatives

Anticipated/Achieved Results

- Improved household income of 329 individuals through sustainable natural resource management and conservation activities
- Supported the formation of eight new agribusiness/forestry enterprises that support cassava and oil palm processing
- Increased awareness of good agricultural practices, best planting techniques, nursery preparation, and transplanting for over 350 farmers
- Disseminated five extension publications through the Agriculture Coordinating Committee and other national and local bodies to interested stakeholders

Funder: USAID

Budget: $2,469,015

Contact: Stephan Guertin at SGuertin@acdivoca.org

USDA Food for Progress and McGovern-Dole Food for Education Programs

Link: http://www.fas.usda.gov/programs/search?f%5b0%5d=field_countries%3A355

McGovern-Dole Food for Education Program: The McGovern–Dole International Food for Education and Child Nutrition Program helps support education, child development and food security in low-income, food-deficit countries around the globe. The program provides for the donation of U.S. agricultural commodities, as well as financial and technical assistance, to support school feeding and maternal and child nutrition projects.

The key objective of the McGovern-Dole Program is to reduce hunger and improve literacy and primary education, especially for girls. By providing school meals, teacher training and related support, McGovern-Dole projects help boost school enrollment and academic performance. At the same time, the program also focuses on improving children's health and learning capacity before they enter school by offering nutrition programs for pregnant and nursing women, infants and pre-schoolers.

McGovern-Dole projects are conducted by non-profit charitable organizations, cooperatives, the United Nations World Food Program and other international organizations. FAS announces a list of priority countries each year, based on factors such as per-capita income and literacy and malnutrition rates.

Proposals are selected based on criteria that include:

- the applicant's experience implementing similar projects and working in the targeted country;
- the targeting of low-income areas with low school attendance or enrollment rates, especially for girls; and
- the involvement of local institutions and communities.

Sustainability is an important aspect of the McGovern-Dole Program. FAS and its partner organizations work to ensure that the communities served by the program can ultimately continue the sponsored activities on their own or with support from other sources such as the host government or local community.

The McGovern-Dole Program is named in honor of Ambassador and former U.S. Senator George McGovern and former U.S. Senator Robert Dole in recognition of their tireless efforts to eradicate childhood hunger.

Food for Progress: The Food for Progress Program helps developing countries and emerging democracies modernize and strengthen their agricultural sectors. U.S. agricultural commodities donated to recipient countries are sold on the local market and the proceeds are used to support agricultural, economic or infrastructure development programs.

Food for Progress has two principal objectives: to improve agricultural productivity and to expand trade of agricultural products.

Past Food for Progress projects have trained farmers in animal and plant health, improved farming methods, developed road and utility systems, established producer cooperatives, provided microcredit, and developed agricultural value chains. Program participants have included private voluntary organizations, foreign governments, universities, and intergovernmental organizations.

FAS solicits project proposals each year and provides a list of priority countries. Organizations eligible to apply include foreign governments, intergovernmental organizations, private voluntary organizations, cooperatives and nongovernmental organizations.

Appendix B: Ongoing Partner Funded Projects at the Liberian Ministry of Agriculture

Information reproduced from the Liberian Ministry of Agriculture website – Links provided below

Agricultural Sector Rehabilitation Project (ASRP/AfDB)

Link: http://www.moa.gov.lr/content.php?content&sub=206&related=27&third=3&pg=tp

This is a US$24.37 million parallel funded project funded by the African Development Bank (AfDB) and International Fund for Agricultural Development (IFAD) with contributions from GOL and the beneficiaries.

Location:	Eight (4) Counties: Grand Gedeh, Grand Kru, Maryland & River Gee;
Type Of Project:	Grant
Type Of Support:	Agricultural Infrastructure Rehabilitation, Capacity Building (Training), Production & Post Harvest Technologies, for Lowland Rice Cultivation
Source Of Funding:	AFDB, GoL
Executing Agency:	Ministry of Agriculture
Implementing Agency/Unit:	Programme Management Unit (PMU)
Budget:	USD 18.3 millions
Project Duration:	Five (5) yrs: April 2010 – March 2015

Goal: Poverty Reduction and Food Security

Objectives:

1. Enhance household incomes.
2. Increase food production

Targeted Beneficiaries: 3.800 farmers in eight counties

Project Components:

1. Agricultural Infrastructure Rehabilitation,
2. Production & Productivity Improvement,
3. Project Management

Expected Results: 1,600 Ha of exiting rice swamps rehabilitated; 100 km of feeder roads rehabilitated, community infrastructure (agro-processing facilities, warehouses & MoA county offices) rehabilitated, Twenty (20) Subject Matter Specialist Trained, Eighty (80) Extension staff Trained.

Inputs: Services, Works, Seeds, Technical Assistance

Project Status: Ongoing

Project Sustainability plan: The project intends to involve the private sector and farmers base organization into management and operations of irrigated low and land post harvest infrastructural and linking activities to farmers net work in project counties after the completion of the project.

Agricultural Sector Rehabilitation Project (ASRP/IFAD)

Link: http://www.moa.gov.lr/content.php?content&sub=206&related=27&third=4&pg=tp

This is a US$24.37 million parallel funded project funded by the African Development Bank (AfDB) and International Fund for Agricultural Development (IFAD) with contributions from GOL and the beneficiaries.

Location:	Four (4) Counties: Bomi, Montserado, Grand Bassa & Grand Cape Mount.
Type Of Project:	Grant
Type Of Support:	Agricultural Infrastructure Rehabilitation, Capacity Building (Training), Production & Post Harvest Technologies, for Lowland Rice Cultivation
Source Of Funding:	IFAD, GoL, Beneficiaries
Executing Agency:	Ministry of Agriculture
Implementing Agency/Unit:	Programme Management Unit (PMU)
Budget:	USD 5 millions
Project Duration:	Five (5) yrs: April 2010 – March 2015

Goal: Poverty Reduction and Food Security

Objectives:

1. Enhance household incomes.
2. Increase food production

Targeted Beneficiaries: 9,600 farmers in four counties (50% women)

Inputs: Improve rice varieties, small ruminants, cassava cuttings.

Project Status: Ongoing

Project Sustainability plan: Farming community will be managers of improve post-harvest facilities and making livestock restocking adds a business beyond household level using the CDA.

Smallholder Tree Crop Revitalization Support Project (STCRSP/IFAD)

Link: http://www.moa.gov.lr/content.php?content&sub=206&related=27&third=6&pg=tp

Location:	One (1) County: Lofa,
Type Of Project:	Loan
Type Of Support:	Cocoa & Coffee Rehabilitation
Source Of Funding:	IFAD, GoL, Private Sector, Beneficiaries
Executing Agency:	Ministry of Agriculture

Implementing Agency/Unit:	Programme Management Unit (PMU)
Budget:	USD 24.9 millions
Project Duration:	Five (5) yrs: July 1 2012 – December 2017

Goal: Empower the rural poor to increase their food security & improve their livelihoods in Lofa County by IFAD

Objectives:

1. Increase incomes of targeted cocoa & coffee smallholder producers

Targeted Beneficiaries: 15,000 smallholder farmers

Project Components:

1. Cocoa & Coffee revitalization,
2. Rehabilitation of Farm to Market Roads,
3. Institution Capacity Building,
4. Project Management

Expected Results: 15000 smallholder farmers use improved cocoa & coffee product's and have access to drying, storage & packing facilities; 315 km of farm to market roads rehabilitated; 3 no. cooperatives legally instituted and have access to technical advice

Inputs: Services, Works, Seeds, Technical Assistance

Project Status: Ongoing

Project Sustainability plan: The project will revitalized cocoa farmers and provide improve varieties of cocoa which will produce and marketed by farmers through farmers' cooperative and post-harvest processing facilities will be encouraged to add value to the product produce by farmers in the counties with improve road network for movement

West Africa Agricultural Productivity Programme (WAAPP-1C Liberia)

Link: http://www.moa.gov.lr/content.php?content&sub=206&related=27&third=12&pg=tp

The West Africa Agricultural Productivity Project is funded by The World Bank credit (US$6 million) and Japanese Trust Fund grant (US$8 million). The goals and the objectives of the project are to: (1) enhance food security, reduce importation of rice and increase incomes of smallholder rice producers, and (2) generate and accelerate the adoption of improved technologies in priority crops of Liberia including rice. The project will be concentrated in eight counties: Grand Gedeh, Sinoe, Maryland, River Gee, Gbarpolu, Margibi, Bong and Bomi.

WAAPP 1C Liberia Project Brief	
Project No.	

Project Title (full Name)	West Africa Agricultural Productivity Program (WAAPP)
Project Counties/districts/towns:	Grand Gedeh, Sinoe, Bomi, Bong, Margibi, Gbarpolu, Maryland, River Gee
Project Type:	loan (World Bank) & Grant (Japan)
Project Budget:	USD14,600,000.00(IDA: USD 6,000,000.00; Japan: USD 8,000,000.00; GOL; USD 600,000.00
Field support:	1. policy 2. R&D 3.Extension &Training 4 production 5. marketing 6. post harvest 7. irrigation 8. credit 9.seed 10, others
Type of support:	Infrastructure, capacity buidling, increased food (cassava and rice) production
Funding Sources (funding Agencies):	World Bank, Japan and Government of Liberia
Project benefecaries (direct/indirect):	150,000 (Farmers, researchers, Universities, Ministry of Agriculture, Central Agriculture Research Institute, CBOs& FBOs)
Project Duration (dd/mm/yy):	five years July 2011-June 2016
Goal of the Project:	To achieve self sufficiency and export capacity for rice and cassava production whilst improving productivity in rice and cassava along their respective value chains
Objective of the Project:	Improving the productivity of rice and cassava along their value chain in order to enhance Liberia's food self sufficiency and regional competitiveness
Project Components:	1. Establish enabling conditions for regional cooperation and market integration 2. Establishing National Centers of Specializations 3. Funding for demand driven technology generation and dissemination and adoption, 4. Project coordination, management, monitoring and evaluation
Expected result/output:	1. Establish Enabling Conditions for sub-Regional Cooperation and Market Integration. 2. Establishing National Centers of Specializations (NCOS). 3. Funding for Demand- Driven Technology Generation and Dissemination. 4. Project Coordination, Management, Monitoring and Evaluation.
Project inputs:	Agricultural Implements, Agro-chemicals, , Technical Services, Goods & Supplies, infrastructural)
Executing Agencies:	Ministry of Agriculture
Implmenting Agencies:	Programme Management Unit (PMU)

Project status:	On-going
Project Coverage:	8 counties (Bong, Margibi, Bomi, Gbarpolu, Grand Gedeh, Rivergee, Maryland & Sinoe)
Contact person:	J. Cyrus Saygbe, Sr.
Email-tel no.:	cyrus.saygbe@moaliberia.org;csaygbe@moa.gov.lr;jcs@yahoo.com
Contact Number:	00231 880 828 775

Smallholder Agricultural Productivity Enhancement & Commercialization (SAPEC)

Link: http://www.moa.gov.lr/content.php?content&sub=206&related=27&third=9&pg=tp

The SAPEC project covers 12 of Liberia's 15 counties, excluding Bong, Lofa and Nimba counties. Total cost is approximately US$52.9 million supported by grants from World Bank's Global Agriculture and Food Security Programme (GAFSP) Trust Fund grant of US$46.5million; and ADF (AfDB) grant of US$6.4 million.

Location:	Grand Gedeh, RiverGee,Maryland, Sinoe, Grand Bassa, Bomi, Gbarpolu,Grand Capemount, Montserrado, Margibi.
Type Of Project:	Loan
Type Of Support:	Agricultural Infrastructure Rehabilitation, Capacity Building (Training), Production & Post Harvest Technologies
Source Of Funding:	AFDB, GoL
Executing Agency:	Ministry of Agriculture
Implementing Agency/Unit:	Programme Management Unit (PMU)
Budget:	USD GAFPS/WB $46.5
Project Duration:	Five (5) yrs: 2013-2017

Goal: The overall goal of the project is to reduce rural poverty and household food insecurity.

The specific objective is to increase the income of smallholder farmers and rural entrepreneurs particularly women. The project is also aimed at improving technology adoption at farm levels and the building of the capacity of the Liberian Agriculture Sector.

Objectives:

1. Enhance incomes of small holder farmers, particularly women and rural youth
2. Intensify land under cassava, rice and vegetable production and improve land husbandry

Targeted Beneficiaries: 110,000 direct beneficiaries. 40% women

Project Components:

1. Crop production ,intensification & Marketing
2. Capacity building and institutional strengthening
3. Project management

Expected Results: To reduce rural poverty and household food insecurity on a sustainable basis. The specific objectives are to:

(i) Expand irrigable land and improve land husbandry, intensify production, and increase value added and market access; and

(ii) Improve technology generation, dissemination, adoption, coordination, management, and implementation capacities at the MOA and other key institutions.

Inputs:

1. Agricultural Implements, Agro-chemicals, Technical Services, Goods & Supplies, infrastructural post-harvest technology, agro machines

Project Status: By January 2013

Project Sustainability plan: Smallholder farming households will their transformed Upland rain-fed farms from subsistence to commercially oriented agriculture through improved crop varieties with extension services made available. Increase in the formation of farmers' base organization into commercial base organization in managing and producing quality goods as an enterprise including women, and rural youth in selected crop enterprises in the target counties.