

LAUNCH Baseline Report

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Acknowledgements

This report is the result of the collective efforts of many individuals who have worked diligently and in sometimes very arduous physical conditions to collect data in some of the most remote physical areas of Liberia.

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List of Acronyms

AED	Academy for Educational Development
AIDS	Acquired Immune Deficiency Syndrome
ALP	Adult Literacy Program
ARS	Agricultural Relief Service
CEO	County Education Officer
CHC	Community Health Committees
CHDC	Community Health Development Committee
CHV	Community Health Volunteers
CRS	Catholic Relief Service
DAO	District Agricultural Officer
DEO	District Education Officer
EU	European Union
FaaB	Farming as a Business
FAO	Food and Agriculture Organization
FFP	Food For Peace
FFS	Farmer Field School
FFW	Food For Work
FGM	Female Genital Mutilation
FSCA	Food Security through Commercialization of Agriculture
FGDs	Focus Group Discussions
GDP	Gross Domestic Product
GOL	Government of Liberia
HDDS	Household Dietary Diversity Score
HIV	Human Immunodeficiency Virus
ICRC	International Center for the Red Cross
IGA	Income Generating Activities
IRC	International Rescue Committee
JSI	John Snow Incorporated
KRTTI	Kakata Rural Teacher Training Institute
LAUNCH	Liberian Agricultural Upgrading, Nutrition and Child Health
LDHS	Liberia Demographic Health Survey
LDS	Lutheran Development Services
LEAP	Local Enterprise Assistance Program
LHP	Lead Health Promoters
LOP	Life of Project
LSVTC	Liberian Swedish Vocational Training Center
LTTP	Liberia Teacher Training Program
MAHFP	Months of Adequate Household Food Provisioning
MCI	Making Cents International
MOA	Ministry of Agriculture
MOE	Ministry of Education
MOHSW	Ministry of Health and Social Welfare
MYAP	Multi Year Assistance Program
NGO	Non Governmental Organization
NRC	Norwegian Rescue Committee
P4P	Purchase for Progress
PCI	Project Concern International

PDA	Personal Digital Assist
PLW	Pregnant and Lactating Women
PLWHA	People Living with HIV/AIDS
PPS	Population Proportion to Size
PTA	Parent Teacher Associations
RWS	Rural Women's Structure
STCP	Sustainable Tree Crops Project
STI	Sexually Transmitted Infections
TBA	Traditional Birth Attendants
UNHCR	United Nations High Commission for Refugees
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
UNDP	United Nations Development Program
WFP	World Food Program
WHO	World Health Organization
ZRTTI	Zorzor Rural Teacher Training Institute

Executive Summary

In June 2010, ACDI/VOCA, signed a cooperative agreement with the United States Agency for International Development (USAID) to finance a five-year Multi Year Assistance Program (MYAP) entitled *Liberian Agricultural Upgrading, Nutrition and Child Health (LAUNCH)*. Project Concern International (PCI), John Snow Incorporated (JSI), and Making Cents International (MCI), are subrecipients to ACDI/VOCA and are responsible for critical elements of the program. The overall goal of the program is to increase food security for the most vulnerable households and communities in two northern regions of Liberia, Bong and Nimba Counties.

In the wake of a 14-year civil war, there is an urgent need to assist the Liberian population in moving from relief and recovery to a sustainable development model. ACDI/VOCA and its partners have proposed an integrated development strategy that addresses a three-pronged approach in reducing levels of food insecurity among the most vulnerable segments of the population. The LAUNCH program proposes to bolster human and institutional capacity in three core areas of development activity: 1) improved agricultural production and support of more diversified livelihoods and income generating activities (IGA), 2) nutritional assistance and supplementary feeding for pregnant or lactating women (PLW) and children under two years, and mobilization/training of community health volunteers and support staff in rural health clinics, and 3) improved access to primary and secondary education and vocational training opportunities among unemployed rural youth.

Over the life of project (LOP), LAUNCH will provide supplementary rations for approximately 23,697 PLW and 32,977 children, as well as 164,885 other family members. Agricultural training and livelihoods support to rural smallholders will target an estimated 14,400 direct beneficiaries. Strengthening of access to and quality of education for children and adolescents, as well as improved capacity and mobilization of village Parent-Teacher Associations (PTA) and support of school administrators and teachers will target 27,600 beneficiaries. Overall, LAUNCH aims to reach 114,588 direct beneficiaries over the five-years LOP.

After conducting an initial scoping and situational analysis, LAUNCH is planning program interventions to two districts in Bong County (Salala, Sanoyea) and four districts in Nimba County (Yarpea-Mahn, Gbey Mahn, Zoe Gbao, Gbor).

The findings of this report serve as the reference point for the measure of project success, and will gauge progress at both the mid- and end-points of the five-year program. Data are presented to explicate project assumptions that underlie factors contributing to food insecurity of the targeted population in the project zones. Most importantly, using a mixed methods approach that combines quantitative and qualitative findings to contextualize and interpret field survey data, the study is intended to help guide the adaptive management of LAUNCH by the organizations in more effectively planning and revising project interventions based on the survey findings.

A team of two international consultants from TANGO International, and two teams of Liberians employed by a private consulting firm, African Development Associates (ADEAS), carried out a quantitative survey and qualitative Focus Group (FG) discussions over a 25 day period, from 22 February to 18 March, 2011.

The baseline study includes a quantitative, population-based survey of households in the project intervention area. A two-stage random sampling procedure was followed, first selecting 27 villages from the list of all villages within the LAUNCH project intervention area, and then randomly selecting a target of 30 households in each of the selected villages. The quantitative survey captured information about

household food security conditions, as well as information to measure impact and outcome level indicators in project IPTT.

The qualitative assessment entailed several instruments, including FG constraints analysis matrices, semi-structured surveys with village leaders, seasonality calendars, and key informant interviews. A topical guide for the FG discussions was organized into sets of matrices with key constraints categories (cultural, economic, knowledge/informational, institutional/organizational, physical resource, natural/environmental) that are addressed at some length under each Strategic Objective (SO) section of this report.

Qualitative observations for this report were derived from FG sessions in 12 villages and 2 pre-test villages. A total of 35 FG sessions were held, with discussions averaging 8-12 participants per FG. Additional instruments included 8 General Survey FG discussions with village leaders, 4 FG Seasonality Calendar discussions, 17 key informant interviews, and 2 group meetings with LAUNCH senior project staff in Monrovia. The qualitative interactions totaled 66 individual or group sessions.

Key Findings for SO1: Agriculture and Livelihoods

Food Security

Despite a diverse mix of cropping systems, smallholder farming communities in Bong and Nimba Counties are faced with chronic food shortages and minimal food diversity that undermine the health and nutritional status of the most vulnerable members of the community, particularly mothers and malnourished children. Secondary livelihood activities including small animal husbandry, poultry production, fishing, hunting, and petty trade activities augment the farming of cereal crops to help meet daily consumptive needs. Nonetheless, most families fall far short in meeting their minimum daily food requirements for several months of the year.

On average, rural households in the target areas go hungry for at least three to four months each year (months of household food provisioning = 9 months), with major rice harvest stocks being depleted during the hunger season. Cash expenditures and debt levels rise during this period as there is no longer sufficient food to feed the family. Some seasonal illnesses, such as malaria, spike during the lean season, leaving families highly vulnerable as food scarcity and disease intersect at this particularly fragile period of the year. This is followed by an abundance of rice near the end of the year, at which time debts are paid off, mostly in rice seed, from the previous rice season.

Local diets are poorly balanced, with starchy crops like rice, cassava, yams, and plantains making up the bulk of the diet. Other than a few leafy sauces (cassava, potato greens), there is very low dietary diversity in other vegetables, fruits, and protein sources which are usually seasonal. When stratified by levels of food security, the most food secure households have significantly higher scores of dietary diversity (6.1) than do the least food secure households (3.6). Households in Nimba County also have higher levels of food diversity (4.8) than do households in Bong County (4.4). The notable lack of dietary diversity is reflected by the fact that on average, families only grow two different food crops per farm cycle.

Households were asked about 15 categories of household assets (see Annex 4, Q279 and Q280 for the types of assets). Overall, surveyed households have on average 5.3 different types of asset. The most food secure households have significantly more asset holdings (6.6) than do the least food secure (3.6). They also have significantly higher incomes (LD \$1,400 vs. LD \$70) generated from crop sales. Farm households in Nimba County also have significantly higher levels of assets (5.4) than do those in Bong County (5.1). Agricultural sales are lower in Nimba (LD \$604) than in Bong (LD \$651), but there is no statistically significant difference.

Crop Productivity

Chronic levels of food insecurity in the counties studied are a function of both *quantity* and *quality* of food items grown. First, only about half of the surveyed households reported that they were engaged in agricultural production. The remaining households relied on other sources for household income, although sales of agricultural products was an important source of income even for households without agricultural production. Productivity of rice and cassava is extremely low, with rice yields averaging just over 1.2 metric tons (MT) per hectare, well below optimal rice yields of at least 3-4 MT per hectare. Cassava yields for the study sample were even worse than rice output, with yields averaging only 0.57 MT/ha, and only 8 percent of respondents obtaining over 1 MT/ha.

Smallholder adoption of improved farm methods and technologies is relatively low, with the mean number of practices averaging less than two for all household categories of food security. The most food secure households have adopted significantly more improved methods (1.8) than the least food secure (1.3), and are growing more crops (2.5) on average than the most vulnerable households (2.0). In comparing the two counties, farmers in Nimba are employing more improved farm methods (1.7) than in Bong (1.4). Significantly more farmers in Nimba are also using at least three improved methods/technologies (16.2 %) than in Bong (7.5%). Post harvest storage methods are very rudimentary, involving the stocking of rice and cassava in the roof thatch above the cooking areas. The use of improved post harvest storage methods was negligible in the survey with only about 1-2 percent of respondents using some improved method against rat infestation.

Access to Training and Inputs

Women play a prominent role in farming in sites visited. They often share field tasks with their spouses and sometimes will have small plots that they cultivate to earn some modest amounts of cash such as vegetables, peppers, and cassava. Despite their important contribution to the food security of their families, they are commonly neglected in terms of participation in training activities to improve farming methods and boost farm productivity. Overall only 4 percent of women received training in farming practices, compared with 10% of men, which is itself also quite a low level. There is a significant difference in women's participation by county. Slightly greater than 5 percent of women in Bong have attended trainings while just below three percent have participated in Nimba.

Income poverty is a pervasive feature of the farm landscape among households in the counties surveyed. Access to credit through formal micro-credit lending programs is almost non-existent. Little more than half of the respondents interviewed have access to some type of financial service which is almost entirely from customary forms of rotating credit or money borrowed from extended kin networks. While statistical differences were found among the proportion of those respondents accessing savings or credit by food security category and by county, the large proportion of funds available in cash or kind was obtained through informal, kin or community-based mechanisms such as *susu* clubs, a form of informal rotating credit based on principles of group lending. The proportion of the most food secure households accessing credit (64.9%) is significantly higher than that of the least food secure households in the survey (37.9%).

The most food secure households also have more capital savings and income to draw upon in times of need (33.9%) while the proportion of more vulnerable households with access to cash savings is significantly lower (9.3%).

A comparison of access to financial services between the two counties shows no overall statistical difference, with roughly one-half of all households able to access some form of savings/credit. However, sources of lending do vary significantly, with a larger percentage of families obtaining loans through traditional *susu* clubs in Nimba (32.8%) than Bong County (17.7%). Conversely, households in Bong County rely more heavily on kin-based social networks to obtain loans (34.8%) while the figure is significantly lower in Nimba County (16.5%).

Key Findings for SO2: Health and Nutrition

Infant and young child feeding practices

Overall, 42 percent of all measured children under 5 were stunted, compared with 39 percent in the 2007 Liberia Demographic and Health Survey (LDHS). The proportion of underweight children is 31 percent, which is significantly higher than the LDHS finding of 19.2 percent, indicating a deterioration in short-term nutritional conditions since 2007. There are no statistically significant differences in the anthropometric indicators by level of household food security status or between the two counties.

Findings on exclusive breastfeeding practices of mothers and their infants 0-5 months suggest that food security status plays an important role in breastfeeding patterns. Approximately 81 percent of the most food secure mothers surveyed had breastfed exclusively in the past 24 hours, while only 47 percent of the most food insecure mothers were able to practice exclusive breastfeeding. Note that these results are much higher than found in the 2007 Liberia Demographic and Health Survey (LDHS), which found only 29% of U6-month children exclusively breastfed. This discrepancy may be explained by the fact that a small number of U6-month children, only 112, were captured in the survey. This may be due to the fact that women in the most food insecure households must resume farming earlier, or because more food secure households are more likely to have received training on child nutrition. Significant differences also exist in exclusive breastfeeding patterns among women in the two counties, with 78 percent of women in Nimba County having practiced exclusive breastfeeding in the past 24 hours, whereas only 52 percent had done so in Bong County. Again, this may be due to differences in access to nutrition training across the two counties.

The proportion of children aged 6-23 months who have low dietary diversity and meal frequency ranges from only 10 – 15 percent. There is no clear, statistically significant difference in the diet patterns of children age 6-23 months across levels of household food security, or between the two counties.

Antenatal and postnatal care

Sixty-six percent of women attended at least four antenatal visits, corroborating findings from the DHS of 2007). There is a significant difference between high and low food security household groups in their antenatal attendance at clinics. Nearly 76 percent of women in the most food secure households were able to attend antenatal visits, while only 58 percent of the least food secure women were able to. There is no statistical difference in the percentage of women attending antenatal clinics when comparing between the two counties.

Among children age 12-23 months who have been fully vaccinated, rates are low, ranging from 11 to 23 percent by food security category. In comparing vaccination rates between counties, significantly more children in Nimba County (21%) have been fully vaccinated than in Bong County (11%).

Potable water supply and sanitation

Findings show that there is no significant difference in the use of drinking water sources between dry and wet seasons. There is also no significant difference in drinking water source between the counties. However, drinking water sources do vary significantly by food security category for each season. In the dry season, the least food secure households rely primarily on hand dug covered wells (48.4%), while the most food secure have greater access to clean water through a borehole (34.7%) or cistern/rainwater supply (15.7%). These findings are also similar in the rainy season. Thus, the more food insecure households are vulnerable in terms of both food and water supply, as they are more likely to be exposed to unsafe drinking water from hand dug wells. A counterintuitive finding is a higher percentage of the most food secure households using water from rivers or ponds (20%) that may be contaminated for drinking, while middle and low food security categories have a lower percentage use of river or pond water sources (18% and 14% respectively). This finding may require further exploration by the LAUNCH team to confirm why more food secure households would use potentially contaminated water from rivers or ponds than the most food insecure households.

Baseline findings confirm that latrines are not widely used in rural communities, with roughly 70 percent of respondents noting that they have no access to a latrine, regardless of food security status. Differences in toilet source do not vary significantly in any way between the two counties.

Hygiene

A relatively high proportion of households reported outbreaks of diarrhea during the past two weeks, with the proportion being significantly higher (44%) among the middle tier food security category. A significant difference was found in the use of covered containers for water storage by food security category, with more middle (59%) and high category households (70.6%) covering their drinking water than low food security category households (48%). There are no significant differences in outbreaks of diarrhea or water storage practice between the two counties.

Findings on hand washing show that it is most frequently practiced before eating and after defecation, and less so before food preparation, feeding children, and after cleaning infants. A significantly larger percentage of middle and high food security households wash their hands than low food security households in four of the hand washing categories. This same observation holds when comparing hand washing behavior of women between the two counties, with more women washing their hands in Nimba County for most of the hand washing categories. From the quantitative survey, there is no clear relationship between hand washing behaviors of caregivers of children and incidence of diarrhea within the household.

Perceptions of vulnerability

In FG discussions, children, widows, the elderly, and the physically handicapped were identified as the most vulnerable to illness and therefore, at greatest risk in terms of their ability to overcome the seasonal window of food scarcity and hunger during the peak of the rainy season from July to September. At this time, children and women are fed first. The most common hunger foods are cassava and palm cabbage. Widows who still have children to care for were identified as particularly vulnerable since they have few kin to draw upon as a labor pool to assist them with farming.

Key Findings for SO3: Education

School Enrollment

Baseline figures were obtained on rates of matriculation to the next grade as well as children enrolled regardless of matriculation. Overall, rates of matriculation are very low, averaging approximately 40 percent, with no significant differences found by food security category. The percentage of students matriculated in middle and high categories is roughly ten percent higher (40%, 41%) than for those who are the most food insecure (31%). On average, the proportion of students remaining in school, regardless of matriculation, is significantly higher, at approximately 88 percent. This figure is slightly lower amongst the most food insecure households (83%). In comparing rates of enrollment and matriculation by county, the difference between the two counties is insignificant.

A number of constraints affect access to education, of which teen pregnancy is a major concern. Teen pregnancy rates are believed to be high and increasing, especially among younger teen girls when they leave their home communities for the larger villages to attend secondary school.

The most significant economic problem identified is a serious shortfall in government operational funds that are essential to the economic foundation of any school system. Operational funds have been suspended for the past 2-3 years, creating serious budget shortfalls and an inability to run schools without basic supplies, such as chalk, books, paper for exams, seating and desks, and other rudimentary supplies and materials.

As a professional body, teachers and administrators have very low levels of education and receive very little in-service professional training or upgrading of pedagogical or administrative skills.

The study finds that there is low motivation and interest among PTA members in supporting educational initiatives in the community. This may be due, in part, to the fact that many PTA members must often walk long distances to attend meetings with school principals and teachers, and they are well occupied with their own farm activities and long days cultivating their fields. There is also a critical problem with PTA members who lack a clear understanding regarding their roles and responsibilities in relation to school authorities. In many instances, there is a lack of a sense of ownership among the members who assume school officials are responsible for all aspects of school administration.

Recommendations for SO1 – Agriculture and Livelihoods

Based on the qualitative and quantitative findings from the baseline study, a number of recommendations have been identified. Some recommendations are consistent with and reinforce project interventions that are already planned; others propose new options and activities to consider, based on findings of the baseline survey.

The precise targeting of communities and proposed interventions in the key project sectors (agriculture, health, education) will require the project team to conduct detailed feasibility assessments early in the start up phase of LAUNCH. A menu of possible interventions in each sector - some of which reinforce current programming strategy, others which entail new directions in program design (eg, integrated, community-based vocational education and training, introduction of low-cost labor saving technologies for garden production and post-harvest processing) will need to be tailored to the unique needs of different beneficiary communities. A 'one size fits all' approach to the proposed interventions below will be inappropriate, and will need to take into account the human, financial, and institutional capabilities and constraints that characterize each community.

IR1.1: Improved Smallholder Production

- Crop productivity – It is clear that many of the prescribed LAUNCH training activities as currently planned are critically needed to drastically improve farming methods in order to attain higher levels of crop productivity that are presently very low. The project will need to find a balance in introducing improved farming methods that both significantly increase yields of the basic staple crops - rice, cassava, tubers, root crops, legumes – in order to meet subsistence needs and increase the period of MAHFP, while simultaneously introducing crops that have a high market value and can significantly boost farm income. Swamp rice farming has the greatest potential for boosting crop output since short cycle rice varieties can produce 2-3 rice harvest per year, potentially doubling or tripling current production levels. Improved management of water resources in the swamp areas can also extend growing seasons for rice, while also providing more water for vegetable gardening.

Adopting a value chain approach which is an area of core expertise for ACDI/VOCA, a thorough assessment needs to be undertaken at this critical juncture of project start up to identify areas of market demand for high value crops and to prioritize those market crops that provide the best economic returns. A number of crops cultivated by women for very modest revenue generation are substantially underdeveloped and should be given serious consideration as crops to promote in boosting women's income. These include sesame, which appears to be substantially under produced in the two regions, and a number of legumes and vegetables, including cowpeas and mung beans, bitter ball, hot pepper, cucumber, and tomatoes. Garden crops should also be promoted for nutritional purposes as well to improve dietary diversity. Families consume leaf sauces which could be augmented with other vegetables, or new vegetable sauces could be promoted on a pilot basis, with the objective of improving both the quantity and quality of sauces eaten and incorporated into the daily staple crop dishes.

- Post-harvest processing and handling – There is a lot of room to improve post-harvest processing, handling, and storage technology. Sesame, for example, has considerable potential for processing, either ground for oil and flour, or sweetened and fabricated into wafers or biscuits with honey. Similar small food processing cottage industries should be explored for promotion in the LAUNCH project. Storage technology using only kitchen attics is very rudimentary, with room for considerable improvement in design and protection of the major staple crops against termites, rats, and other pests.

Women would also benefit substantially from the introduction of labor saving technologies, such as rice mills, cassava grinders, and simple solar dryers for processing cassava as *gari*, or for drying cocoa and other crops. Rice mills, due to high capital cost, could be introduced and structured around village clusters. Labor saving technologies are critically needed, particularly for the pounding and processing of grains. Due to long distances to markets, processed crops such as milled rice could reduce the transport weight of bulk grains which are often transported by women on their heads, walking extreme distances to area markets.

- Off season crop production – With residual water bodies from the swamp bottomlands, efforts should be made to extend dry season gardening with improved water conservation, conveyance, and storage technologies, in order to market vegetable crops in the larger villages when higher prices can be obtained. Low-cost drip irrigation technology could be introduced, using a pro-poor smallholder market development model, to target high value horticultural crops for off-season production. Improved processing technology noted above would help extend the window for growing dry season crops (okra, cassava, hot pepper, tomato, onion, garlic, etc) that could then be dried and sold in the larger market villages late into the dry season and early rainy season at substantially higher prices.

- Training and access to agricultural inputs – Training efforts need to obviously do much more to focus on women and promote gender-integrated agronomic skills training sessions that build upon current gendered divisions of labor. LAUNCH should devote time now to carry out a systematic review of the experiences of several of the leading Farmer Field School (FFS) programs supported by other donors to

extract best practices and lessons learned to date, and to assure that any past mistakes are not repeated in the LAUNCH program. Training sessions should also be systematically integrated as core components of an adult literacy program that emphasizes functional skills in farming, accounting, bookkeeping, and farming as a business. In order to be successful, agronomic training needs to be a sustained, ongoing program rather than short, intensive, one-off technical orientation sessions. A FFS model that works with farmers on a monthly sustained basis over a five-year time frame has the greatest chance of having a lasting impact and fundamental transformation of farming skills among farmers in the project.

Project mini-grants could prove effective in establishing small agro-entrepreneurs and agro-vets (lead farmers) as key farm extension agents and service providers of improved seed and inputs. The organization of agro-entrepreneurs/agro-vets into a service provision units or clusters could follow the FFS model and be closely integrated within existing FFS production units.

Access to critical inputs, particularly improved rice seed, will require that LAUNCH conduct a thorough value chain analysis of specific sub-sectors like rice to identify opportunities and constraints in the availability of products and services, to assure that seed, fertilizer, technology, and other critical inputs are accessible to rural smallholders on an affordable basis through normal market channels. Access to micro-credit will require substantial planning and design to assure that farmers can obtain loans for small enterprise purposes, with a high degree of confidence that loans can be repaid. Past government and NGO efforts in introducing micro-credit programs have been largely unsuccessful in Bong and Nimba Counties. These programs should be carefully reviewed to assess past experience and to draw lessons learned in avoiding replication of past failures. It may be that building upon current indigenous lending institutions, such as the *susu* club, with the infusion of small mini-grants will prove more effective than the introduction of more formal lending mechanisms that require more administrative and financial oversight, and significantly higher transactional costs.

Another avenue to explore would be support to organized women's groups such as the Rural Women's Structure for micro-credit lending through the use of project mini-grants to fund farm production activities. Funds might also be used to assist women in establishing small business activities in tie dying, baking, soap making, sewing, small poultry production, snail farming, weaving of baskets and fish nets, and petty trade in dry goods, etc. Such efforts would need to be closely coordinated with the Ministry of Gender and Development that has organized the Rural Women's Structure cooperatives.

IR 1.2: Increased Rural Household Livelihood Opportunities

- Diversification of livelihood income generating activities (IGAs) – The introduction and mobilization of farmer associations, linkage of such groups to market vendors, and improvements in bulking, warehousing, etc, should first look at currently existing farmer groups to assess the most appropriate form of farm collective to strengthen. Similar to the introduction of micro-credit structures that could be endogenous (*susu* clubs) or exogenous (INGO micro-lending) entities, LAUNCH should carefully examine the composition and nature of reciprocal *kuu* labor parties to determine whether it is feasible to build upon such organically derived social units of production or to establish formal farmer cooperative units that do not currently exist.

A number of farm livelihoods in addition to crop production have been severely disrupted as a result of the war years, particularly the livestock sector. Opportunities exist to rebuild this sector, with an emphasis on small ruminants (goats, sheep, pigs) and poultry (chickens, ducks, guinea fowl, guinea pigs). Methods of intensive animal production and fattening of goats, chickens, sheep, pigs, and cattle, based on use of animal pens and intensive feeding, have been successfully been introduced by other NGOs and should be closely given consideration as a viable model and IGA strategy that can help boost farm incomes within a short time frame.

Mini-grants could be used to support the construction of animal pens for chickens and other poultry, and small ruminants including goats and sheep. Men's and women's livestock production groups could be organized in clusters among groups of villages, and a FFS model could be adopted for training purposes for poultry and small animal production. This model could also be introduced among PTA groups for purposes of income generation to raise funds for support of school activities and operational funds. There is a major need to build capacity and train community groups in basic veterinary health care in order to identify and treat the most common diseases. At least one 'barefoot' para-vet could be trained per community, and mini-grants could be used to stock animal vaccines and medicines for primary care treatment and prevention of the most common animal diseases.

Recommendations for SO2 – Health and Nutrition

IR 2.1: Improved Nutrition, Feeding and Care Practices

- Maternal health education care groups – There is a great need to introduce nutritional education and counseling following WHO IYCF guidelines and promote cultivation and consumption of meat and non-meat proteins sources in the diets of PLW, such as sesame (benne seed), peanuts, and beans mixed with rice. These food sources would prove highly nutritional if introduced as blended meal in the complementary feeding of infants. This could be integrated into a women's garden program that boosts production of vegetable crops, in addition to legumes and fruit tree crops.

IR 2.2: Improved Prevention and Treatment of Maternal and Child Illnesses

- Gender-based family planning/contraception – Efforts should be made to link education in family planning and contraception with awareness raising on nutrition and breast feeding practices. Training sessions and discussions groups should be held with community health care groups to strengthen awareness of optimal breastfeeding practices and adequate complementary feeding from 6 to 24 months. Men need to be targeted for education and awareness raising that links family planning with women's breastfeeding and infant care practices. FG awareness raising sessions should be held at clinics or in the villages both jointly with women and men, and in separate gender-based groups as well.
- Strengthen CHVs and TTMs – CHVs must walk long distances to carry out vaccination outreach, and to attend training sessions in local health care clinics. A form of incentivization should be introduced among the CHVs that provides support and encouragement, yet does not create a culture of dependency.
- Potable water supply and sanitation – There is a very clear need to improve access to potable drinking water throughout the entire year, and to upgrade public hygiene and sanitation associated with latrines in villages. While the cost of constructing more borehole wells with hand pumps may prove prohibitive for the project, LAUNCH may wish to explore the financial feasibility of increasing well depths in existing boreholes that frequently run dry several months a year. Hand pump repair and maintenance is another major problem that could benefit from the establishment of community water committees who are responsible for the funding and maintenance of hand pumps and water points, with roles and responsibilities similar to those of the PTA in the education sector. Mini-grants could be targeted toward helping the water committees to establish income generating activities that are intended for capital revenue generation for the maintenance and upkeep of community water points.

There is also a need to introduce low-cost water filters in villages that cannot afford hand dug wells (estimated to cost \$2,500 - \$3,000 to construct) or borehole wells. Low-cost technology alternatives include bio-sand filters (costing \$70 to \$100) that have been successfully introduced in the LIAP project, or low-cost ceramic water filters (\$5-\$10) that have been widely and successfully distributed in a number of developing countries throughout the world by various INGOs and various national Red Cross societies.¹

There appears to be little maintenance of latrines visited both in villages which likely is a reason for their low usage and relative unpopularity with some individuals spoken with during the survey. Latrine holes are uncovered, and flies and larvae are abundant. There are no signs of ash used to control odor or stimulate decomposition. LAUNCH should consider targeting hygiene education and awareness-raising sessions linked to the community water committees or a broader water and sanitation committee that emphasizes proper use and maintenance of latrines. There is a major need to build more latrines under the LAUNCH project, but their usage will most likely remain low unless there is an integrated approach or close linkage of hardware (latrines) with software (training, education on sanitation, hygiene and maintenance of latrines). A market-oriented, approach to latrine construction and maintenance, tied to behavioral change and hand washing has been successfully introduced in Vietnam and has being touted by the World Bank and London School of Tropical Medicine as a model for diffusion to other developing nations.²

Recommendations for SO3 – Education

IR 3.1: Improved Quality of Primary School and Livelihoods-based Education for Youth

- School infrastructure – The most immediately visible need throughout most all rural schools at both the primary and secondary level is the need for the most basic physical items, particularly chairs and tables which are in very short supply, as well as school supplies such as chalk, paper, and text books. Many of the hand pumps seen are not in working order, and numbers of school latrines in relation to students and teachers are very low. With a severe shortage of operating capital from the government, school officials, in partnership with the PTAs, will need to explore more innovative approaches to fund mobilization as a means of providing the most basic physical resources needed to significantly improve the quality of learning for students and the teaching conditions of instructors. An integrated approach to educational upgrading that links several objectives – physical infrastructure, skills-oriented curriculum development, agricultural education, and vocational skills training – is proposed here.
- Integrated, livelihoods-based education – There is a vast need and challenge to make education relevant and skills-based in order to address the most basic needs of the community – food provisioning, youth employment, and physical upgrading of school infrastructure. An integrated model that links agricultural education in the classroom with hands-on field practice in growing crops and vegetables could significantly improve the dietary diversity of school lunch programs, provision communities with a richer, more varied diet of fruits, vegetables, legumes, pulses, etc, and train a new generation of youth to develop new farming skills that can be translated into agribusiness and farm enterprise employment opportunities upon completion of primary and secondary school. Agricultural education curriculum as presently taught in the areas visited is largely theoretical, with little or no

¹ Low-cost ceramic water filters are being introduced in many developing countries on a viable commercial basis, including neighboring Ghana, and could prove highly effective and affordable in Liberia under the LAUNCH initiative if promoted and marketed properly. Links to NGOs like Potters for Peace, Red Cross, IDE, etc. that have successfully promoted the filter include: http://en.wikipedia.org/wiki/Ceramic_water_filter; <http://other90.cooperhewitt.org/design/ceramic-water-filter/>; <http://inhabitat.com/ceramic-water-filters-win-iwa-award-for-cambodia/>;

<http://www.ideorg.org/OurTechnologies/CeramicWaterPurifier.aspx>

² <http://www.ideorg.org/OurMethod/InnovationUpdate.aspx>; <http://www.adb.org/NGOs/annex1016.asp>;

practical field application, according to school officials interviewed. Therefore, innovative curricula in farming and agronomy, including gardening, could be introduced at both the primary and secondary school level, with practical field application and the creation of small farm plots and gardens adjacent to the schools. School gardens could be directly linked to lunch feeding programs to provide a long-term sustainable source of vegetables and more nutritionally balanced meals for students.

- Appropriate technology and vocational skills training - An integrated agricultural curriculum could also introduce components that train students to acquire vocational skills that could directly serve the needs of both the physical infrastructure needs of the schools, and the food provisioning of school gardens and small farm plots. Examples include:
 - Masonry – A vocational track could be selected by some students who wish to become village masons. There is great potential to capture water from the zinc roofs of the schools during the rainy season by constructing large water harvesting tanks made of cement mixed with other materials, that could provision water for school gardens for an extended period well into the dry season. Such storage systems could use small-scale, affordable drip irrigation home garden kits to grow vegetables, fruits and other horticultural crops that could both augment the diet of students in lunch programs, and become an IGA to feed into the operational budget of the schools. Youth could also be trained to build a range of improved latrines for the schools and the community, as another masonry skill. Obviously, a highly skilled mason, trained in water harvesting and latrine construction, would need to be hired or funded through LAUNCH initially to serve as the lead vocational instructor through the school system. It is possible that the individual could work with a cluster of schools in a region, and rotate weekly to each school if funding is cost prohibitive to assign an individual to only one school.
 - Carpentry – Similarly, a carpentry vocational track could be established that links math and other related skills in the classroom with the physical skills needed to become a carpenter. The primary objective would be for such youth to build tables and chairs, and other wood-based materials that are needed for schools, including assistance with roofing for latrines, storage areas for school field plots and gardens, etc. Trees from community land could be logged and milled to use as building materials for the schools.
 - Food processing – a track on food processing could be introduced that focuses on the processing of foods and the use of solar grain dryers that could be built by student carpenters. Female students in particular could acquire new skills in drying and preserving foods, particularly fruits and vegetables, in addition to baking and cooking skills and experimentation with new recipes and sauces provided from the school plots and gardens.

Low-cost affordable technologies such as small-scale drip garden kits and water harvesting and storage methods have been successfully introduced in many poor rural communities in the developing countries, significantly boosting farm income and improving diets of the rural poor.³ LAUNCH could potentially integrate the marketing of appropriate technologies in a new, innovative pilot school curriculum that links many of the components described above and serves multiple objectives of improving the quality of education for youth, skills acquisition in areas that could generate farm-based employment and the future creation of ‘agro-entrepreneurs’, and provide youth with new employment opportunities upon finishing primary or secondary school. Other livelihoods-based skills noted in the report such as tie dyeing, sewing, soap making, weaving, and small-business activities

³ One such example is the manufacture and marketing of low-cost drip garden systems amongst the rural poor in India, including many landless women who have now grow vegetables for markets as well as household consumption (<http://www.ide-india.org/ide/drip.shtml>)

could be integrated and taught as vocational tracks within an applied, skills-based educational curriculum. Rooting such skills training within home communities rather than sending youth off to specialized vocational institutes in larger towns could provide many obvious advantages described above to youth, school authorities, and the community at large.

IR 3.2: Improved Management of Schools/Education Programs

- PTA school coordination – Local PTAs will need considerable support in improving their working relationship with school authorities. There is a strong need to define roles and responsibilities of PTA members and improve communication and coordination with school principals and teachers. Funds should be allocated to support the cost for PTA members to attend quarterly planning and coordination meetings with county and district level education officers and local school educators.
- Adult literacy training for PTA members – Most PTA members are limited in their capacities due to very low literacy levels. An adult literacy program should target PTA members that helps them acquire the literacy skills needed to operate the PTA as a business enterprise, including financial management, business management, and enterprise-based farm activities.
- PTA skills training in IGA – PTA members would benefit considerably from targeted training activities that build capacity in improved farming methods, livestock production, and IGA (soap making, tie dye, baking, etc) to boost capacity of the PTAs to generate funds for school management. This skills training could be adapted and linked to a student-PTA partnership program, participating with students in the integrated agro-based educational curriculum described above in an after school hours program.
- Statistical record keeping – Although perhaps not a project priority, statistical record keeping systems are very weak and antiquated in the country, district, and local community education offices visited. There is an important need to upgrade statistical record keeping and data collection systems on basic educational information, such as school retention and matriculation rates. The coordination and sharing of data among county, district, and local educators is very weak, if not non-existent.
- Policy advocacy – An area most likely out of the purview of LAUNCH is policy advocacy at the central ministerial level to work closely with the MoE in modernizing an antiquated and cumbersome payroll system that seriously plagues school officials and teachers at the village level and is a key factor affecting the quality of education due to chronic delays in the disbursement of salaries.

1.0 Introduction

1.1 Context

In June 2010, ACDI/VOCA, signed a cooperative agreement with the United States Agency for International Development (USAID) for a five-year Multi Year Assistance Program (MYAP) entitled *Liberian Agricultural Upgrading, Nutrition and Child Health (LAUNCH)*. Subrecipients on this project are Project Concern International (PCI), John Snow Incorporated (JSI), and Making Cents International. The overall goal of the program is to increase food security for the most vulnerable households and communities in two northern regions of Liberia, Bong and Nimba Counties.

Devastated by a 14-year civil war, the Liberian government established a peace accord and transition toward a democratic government in 2003, and elected their first female president, Ellen Johnson Sirleaf, in late 2005. The nation has now undergone five years of peace building and reconstruction, investing in roads, schools, hospitals and clinics, educational facilities, electrical power supply, and other essential physical infrastructure that was destroyed or severely damaged during the war. While considerable strides have been made in rebuilding the nation, progress remains slow and the lack of access to basic infrastructure such as electricity, fuel supply, and communications, particularly in the rural areas where this study was carried out, is quite acute and pronounced.

Among the most deleterious effects of the war, loss of food supply and productive agricultural capacity has led to a highly food insecure population, of which children under the age of five are the most adversely affected. Estimates of chronic malnutrition and stunting among children under five vary from 39 to 42 percent,^{4,5} while rates of underweight and wasting were 19 and 7.5 percent respectively, according to the 2007 Liberia Demographic and Health Survey (LDHS). The rate for severely wasted children was 2.8 percent.

Liberia is endowed with a rich natural resource base, of which timber and natural minerals are the most abundant. Nonetheless, civil unrest for more than a decade has impeded progress toward economic growth and prosperity for the vast majority of the population. Per capita gross domestic product (GDP) remained exceptionally low, at US\$362 in 2009, while Liberia ranks among the poorest nations in the world, at 169 out of 182, according to the UNDP 2009 Human Development Index. The report estimates that 68 percent of rural inhabitants and two-thirds of the overall population live on less than one dollar a day.

1.2 LAUNCH Program Objectives

It is in this context of extreme poverty and the urgent need to assist the Liberian population in moving from relief and recovery to a sustainable development model that ACDI/VOCA and its subrecipients has proposed an integrated development strategy that addresses a three-pronged approach in reducing levels of food insecurity among the most vulnerable segments of the population. The LAUNCH partnership proposes to bolster human and institutional capacity in three core areas of development activity: 1) improved agricultural production and support of more diversified livelihoods and income generating activities (IGA), 2) nutritional assistance and

⁴ Republic of Liberia *The State of Food and Nutrition Security in Liberia. Comprehensive Food Security and Nutrition Survey 2010*. October 2010.

⁵ Sutter, Phil and Kristen Cashin. *USAID Office of Food for Peace Liberia Food Security Country Framework FY 2010 – FY 2014*. Washington, D.C.: Food and Nutrition Technical Assistance II Project (FANTA-2), Academy for Educational Development (AED), 2009.

supplementary feeding for pregnant or lactating women (PLW) and children under two years, and mobilization/training of community health volunteers and support staff in rural health clinics, and 3) improved access to primary and secondary education and vocational training opportunities among unemployed rural youth.

ACDI/VOCA notes in the MYAP proposal to USAID that chronic food insecurity in Liberia may be attributed to the following key factors: 1) low productivity of agriculture and environmental degradation as a result of poor production practices; 2) lack of access to production inputs and extension services; 3) an inadequate road and transportation network; 4) lack of access to health services, clean water and sanitary facilities; 5) poor infant and young child feeding practices; and 6) low education levels that contribute to a “poverty capacity.”⁶

To address these core constraints, LAUNCH has proposed the following strategy to strengthen the weakened capacity of communities to meet their basic needs in food production, health, nutrition, sanitation, educational advancement and rural employment:

“LAUNCH will work with smallholders to sustainably improve production practices, increase farm management skills, build resilience, and expand economic opportunities through a value chain approach. The health and nutrition strategy will focus on the prevention of malnutrition, the early identification and treatment of acute malnutrition to prevent further deterioration of health/nutritional status, and the promotion of high-impact health and nutrition interventions at household, community and facility levels. Households receiving supplementary food rations will be targeted for inclusion in the agricultural and livelihoods activities. The ration has been carefully designed to reduce malnutrition without creating beneficiary dependencies and undermining a market approach. Education activities will develop community capacities to support education and increase access by youth to livelihoods education that increases their employability.”⁷

The LAUNCH partnership brings a complementary suite of institutional capabilities and skills in achieving the overall program goal and sectoral activities of the project. ACDI/VOCA has extensive international experience in agricultural development with sectoral expertise in value chain analysis and a pro-poor, market-based approach to smallholder production as a small-scale farm enterprise. PCI has acquired international expertise in the sectors of health, nutrition, and education, and will lead program activities in these respective areas. JSI, currently assisting the government of Liberia (GoL) and the Ministry of Health and Social Welfare (MoHSW) to rebuild the health sector, will provide technical backstopping and support to PCI with the health and nutrition component of the program. Making Cents International will support education and livelihoods objectives by introducing innovative training curricula in entrepreneurship for youth and women.

A graphic of the LAUNCH results framework below illustrates the relationship between the overarching goal of improved food security among vulnerable families in Bong and Nimba Counties to the three core strategic objectives of increased access to food through improved agricultural output, reduced chronic malnutrition among women and children under five, and improved educational opportunities for children and youth.

⁶ ACDI/VOCA *USAID Title II Multi-Year Assistance Program. Liberian Agricultural Upgrading, Nutrition and Child Health (LAUNCH)*. Proposal submission to USAID, January 15, 2010.

⁷ *Ibid.*

Figure 1. LAUNCH Results Framework



Over the life of project (LOP), LAUNCH will provide supplementary rations for approximately 23,697 PLW and 32,977 children, as well as 164,885 other family members. Agricultural training and livelihoods support to rural smallholders will target an estimated 14,400 direct beneficiaries. Strengthening access to and quality of education for children and adolescents, as well as improved capacity and mobilization of village Parent-Teacher Associations (PTA) and support of school administrators and teachers will target 27,600 beneficiaries. Overall, LAUNCH aims to reach 114,588 direct beneficiaries over the five-year life of the project (LOP).

After conducting an initial scoping and situational analysis, LAUNCH originally proposed to target beneficiaries in four districts, including Bong (Salala and Sanoyea districts); Nimba (Wee Gbey Mahn, Zoe Gbao and Gbor districts); Grand Gedeh (Cavala and Tchien districts); and River Gee (Chedepo, Karforh and Glaro districts). The final cooperative agreement included two counties, Bong and Nimba, with the two districts (Salala, Sanoyea) remaining the same in Bong,

while one additional district was included in Nimba (Yarpea-Mahn). A map of the targeted zones of intervention for the two counties is provided below.

Figure 2. Zones of LAUNCH Intervention, Bong and Nimba Counties, Liberia



1.3 Objectives of the LAUNCH Baseline study

The findings of this report will serve as the reference point for the measure of project success and will gauge progress at both the mid- and end-points of the five-year program. Per the terms of reference (TOR) for this study (Annex 1), data are presented to explicate project assumptions that underlie factors contributing to food insecurity of the targeted population in the project zones. Most importantly, using a mixed methods approach that combines quantitative and qualitative findings to contextualize and interpret field survey data, the study is intended to help guide the adaptive management of LAUNCH by the organizations in more effectively planning and revising project interventions based on the survey findings. As outlined in the Scope of Work (SOW), the findings of this study have the following objectives:

1. To establish the baseline values for the impact and outcome (intermediate results) indicators identified in the LAUNCH IPTT. Additional indicators may be added to the baseline if the project has already identified project specific outcome level indicators (to capture behavioral or systemic changes) that are not included in the IPTT. The baseline values will be used to assess progress, and results at impact, and outcomes. Table 1

- summarizes the IPTT indicators that have been measured in the quantitative baseline survey of households, and the baseline values along with 95% confidence intervals are provided in Annex 2.
2. To establish food insecurity and socio-economic status of the target households. Using quantitative data and qualitative information, gain an in-depth understanding of the causes of food insecurity in the target areas.
 3. Define vulnerability, identify response patterns to shocks and disasters and provide information for the trigger indicators identified.

Table 1. IPTT indicators measure in baseline survey

1. Population-based IPTT Indicators ¹	
1	Average number of months of adequate household food provisioning (FFP Impact Indicator #1)
2	Average household dietary diversity score (FFP Impact Indicator #2)
3	Change in rural assets
4	Increased sales of selected commodities and products (Mission Output Indicator, Economic Growth)
5	Percentage of underweight (WAZ<-2) children aged 0-59 months (FFP Impact Indicator #3)
6	Percentage of stunted (HAZ<-2) children aged 6-59 months (FFP Impact Indicator #4)
7	% of women in reproductive age (15-49 years) with a MUAC <23 cm (FFP Monitoring Indicator #1, used as an Impact indicator at the SO level)
8	Number of women of reproductive age (15-49 years) with a MUAC <23 cm / Total number of women measured
9	# of infants 0-5 months who received only breast milk during the previous day/Total # infants 0-5 months measured
10	Breastfed infants: # children 6-23 months who had minimum dietary diversity and minimum meal frequency the previous day/Total # breastfed children 6-23 months measured. Non-breastfed: # children 6-23 months who received at least 2 milk feedings and had minimum dietary diversity (not including milk feeds) and minimum meal frequency during previous day/Total # non-breastfed children 6-23 months measured.
11	% of children age 12-23 months fully vaccinated
12	% of mothers with children age 0-23 months who had four or more antenatal visits when they were pregnant with their youngest child
13	Education - Promotion Rate: The percentage of children enrolled in target schools in a given year who are promoted to the next grade at the end of the year.
14	Education - Continuation Rate: The percentage of children enrolled in target schools in a given year who continue to be enrolled in the next year, whether they are promoted or not.
2. Additional IPTT Indicators ²	
1	% of women participating in farmer training groups
2	% of smallholders using at least 3 recommended sustainable agronomic technologies
3	% of smallholders households diversifying crops cultivated
4	% of smallholder households engaged in bulk marketing
5	% smallholder households with access to cash savings and/or credit (through community associations or formal financial institutions)
6	% of households reporting an outbreak of diarrhea

¹ Indicators identified in the IPTT to be collected in population-based survey for Baseline and Final Evaluations

² Indicators identified in the IPTT to be collected through project monitoring but can also be collected from a population-based survey for evaluation purposes.

Cross-cutting themes on gender equity and disaster risk reduction are also addressed in the study. As a result of years of civil strife, war, and bloodshed, institutional capacity to prepare and respond to both anthropogenic and natural calamities that pose a substantial risk to the population has been severely undermined and is in need of urgent support from outside donor institutions to build community resilience to effectively respond to potential future threats, such as droughts, floods, epidemics, or civil unrest.

The TOR states that “...a gender analysis component will be part of the baseline and will contribute to understanding intra household resource dynamics, gender roles and responsibilities within the household production system; cultural beliefs and practices around pregnancy, lactation, health, hygiene and nutrition; and how competing priorities affect optimal health, hygiene and nutrition practices.”⁸ Specifically, the TOR calls for the following dimensions of gender relations to be addressed in the study:

- identify programmatic and operational constraints and corresponding opportunities for gender integration, gender equity, and gender sensitivity in the LAUNCH program design and operations;
- develop specific and practical recommendations on how to integrate gender into program design and operations;
- provide knowledge on gender issues (the dynamics between and the status of men and women) with regards to food security, nutrition and agriculture in the targeted geographic MYAP project areas of Liberia, including PLHIV and other vulnerable groups.

1.4 Methodology

1.4.1 Quantitative survey design

The sample design was that of an “adequacy design”, or non-experimental design for simple pre-post comparison of results, consistent with FFP requirements for baseline and end-line survey designs. The survey is “population-based” in that the sample is drawn randomly from the sample frame of all households residing within the intervention areas of the LAUNCH program. The sample size is determined to provide statistically representative results for indicators at the level of household and children under five for the entire project area, defined as specific districts in Bong and Nimba counties. A two-stage random sampling procedure was followed, first selecting 27 villages from the complete list of all villages within the LAUNCH project intervention area, and then randomly selecting a target of 30 households in each of the selected villages. The decision of the number of clusters (villages) and number of households was made to maximize the number of clusters in the sample while keeping a large enough number of households per cluster for logistic considerations. It was determined that 30 households was the smallest number of households that could be done by a survey team in one village in one day, so to reach the desired minimum sample, a total of 27 villages would need to be selected. The 27 villages were selected from a complete list of all villages in the project intervention area, using the Probability Proportional to Size (PPS) selection procedure. Populations for the towns were obtained from the 2008 Population Census of Liberia. Using this process, the number of villages selected for each county reflects the relative populations of the two counties.

In each of the selected villages, 30 households were selected to be interviewed, with each of the 5 household enumerators on a team responsible to interview 6 households. Because no sample frame exists for drawing households at the village level, a random-walk process was used to select households to be interviewed. Team leaders were instructed to assess the total number of houses along 5 paths moving in different directions from a central point in the village, and one enumerator assigned to each of the 5 paths. The skip interval for each enumerator was computed

⁸ ACDI/VOCA *Liberian Agricultural Upgrading, Nutrition and Child Health MYAP. Terms of Reference Baseline Study Plan.* 2011.

as the total number of houses along a particular path divided by 6. Each interviewer randomly chose a number within the skip interval to select the first household to be interviewed, and then the skip interval was applied as the interviewer moved along their path to identify subsequent households to be interviewed.

1.4.1.1 Sample size calculations

The baseline sample size was calculated using the following formula.^{9,10}

$$n = D [(Z_{\alpha} + Z_{\beta})^2 * (P1 (1 - P1) + P2 (1 - P2)) / (P2 - P1)^2]$$

KEY:

n = required minimum sample size per survey round or comparison group

D = design effect

P1 = the estimated level of an indicator measured as a proportion at the time of the first survey or for the control area

P2 = the expected level of the indicator either at some future date or for the project area such that the quantity (P2 - P1) is the size of the magnitude of change it is desired to be able to detect

Z_α = the Z-score corresponding to the degree of confidence with which it is desired to be able to conclude that an observed change of size (P2 - P1) would not have occurred by chance (α - the level of statistical significance), and

Z_β = the z-score corresponding to the degree of confidence with which it is desired to be certain of detecting a change of size (P2 - P1) if one actually occurred (1 - β - statistical power).

The indicator used as the basis of sampling is stunting rates for children under five years of age. According to the 2007 Liberia DHS, Liberia has a 39% stunting rate for children under five, thus P1 is set at 0.39. The scope of work suggests that LAUNCH expects to reduce stunting by approximately ten percentage points over the course of the five year program. Using the following parameter values, the equation will yield the minimum required sample size per stratum:

$$D = 2.0$$

$$P1 = .39$$

$$P2 = .29$$

$$Z_{\alpha} = 1.645 (\alpha=0.05)$$

$$Z_{\beta} = 0.84 (\beta=0.20)$$

The estimated value of n, or the minimum required sample size, is 549. Because not all households have under-5 children, the minimum sample size of households needs to be inflated to ensure that a sufficient number of children (549) are measured. The Liberian DHS 2007 shows that 17.7 percent of the population is under five and the average household size is five members. This suggests that between 80 and 85 percent of households will have a child in this age group. In order to achieve the necessary minimum number of 549 U5 children, a total of 727 households would need to be interviewed. The survey visited 27 villages (clusters) and interviewed a target of

⁹ This calculates the minimum required sample per strata/survey round

¹⁰ Proportions are used rather than means because determining what a realistic reduction in mean z-score is less documented than reduction in stunting rates.

30 households per village in order to reach a targeted total of 810 households, just over 10% greater than the minimum required sample of 725 households.

<i>Desired percentage point change</i>	D	Minimum sample required per stratum	Increase sample to reach adequate # of U5s + 10% non-response
<i>10%</i>	2.0	549	725

1.4.1.2 Village/household selection

A two-stage cluster design was employed for the baseline survey, with the first stage involving selection of clusters (villages) and the second stage being the selection of households. The sampling frame consisted of all villages targeted by LAUNCH and since this is a population-based survey, all households residing in these villages were eligible for interviewing. Villages were selected using probability proportional to size (PPS) from the list of all villages in the project intervention area. Within selected villages, households were then selected to be interviewed using the random walk process described in the FANTA sampling guide. For reasons of logistics, villages with less than 30 reported households and villages that are inaccessible by road were excluded from the sample frame. Interviews were conducted with both the household head and the mothers of under-5 children present in the interviews, to ensure that accurate information was obtained in the interview. If the household members with the necessary information were not available at the time of first contact with the household, the enumerators would arrange to return to the household at a later time when they could meet with the appropriate household members.

After completing household interviews, mothers were asked to take their under-5 children to meet with the anthropometric team to have their children measured. In addition, all women of child-bearing age (15-49) were asked to visit the anthropometric team to have their MUAC measurement taken.

Annex 3 identifies the selected villages, by county and district, and the number of households and number of under-5 children interviewed by village.

1.4.1.3 Training workshop

A training workshop was held from 17-21 February in Gbarnga, Bong County. Training was provided to 18 participants, including household interviewers, anthropometric enumerators, supervisors, and program M&E staff responsible for coordinating data collection and aggregation. The workshop covered the following topics:

1. Overview of the LAUNCH program
2. Review of the Baseline Survey objectives
3. Question-by-question review of the questionnaire form
4. Training and testing on anthropometric measuring of children
5. Use of PDAs
6. Administration of the questionnaire with PDAs
7. Mock testing of questionnaire

Survey instruments were field tested in a nearby community, revised and finalized for fieldwork. Anthropometric enumerators received training in anthropometric measurement techniques and protocol from a medical doctor working at the government hospital near Gbarnga

The survey instrument was designed to capture necessary information to measure IPTT outcome and impact indicators. Additional questions were included for program evaluation purposes. One questionnaire form is for household-level information, and another form is to capture anthropometric measurements of under-5 children and MUAC measurements of women of childbearing age. The quantitative questionnaires are provided in Annex 4.

1.4.1.4 Team composition, survey process, and quality control

The survey was conducted by two teams, each of which was comprised of five enumerators. Anthropometric measurements were collected by two additional teams, each with two enumerators. The anthropometric teams were responsible for measuring all children of interviewed households under five years of age. At the end of the day, each team leader was responsible for backing up data from each household and anthropometric enumerator to a memory card and onto a laptop computer. During the course of the fieldwork, the quantitative survey coordinator reviewed recorded data for any irregularities or indications of improper data entry procedures. If anomalous results were found, the survey coordinator rechecked the results with the responsible enumerators and, if necessary, gave updated instructions to all enumerators to clarify the appropriate data entry procedures.

1.4.1.5 Data analysis

Data from the PDAs were aggregated using the Survey System v9.0 software and exported to SPSS v13.0 for analysis. Anthropometric data were compiled and processed using WHO Anthro software to determine malnutrition rates using the WHO 2006 reference population. A comprehensive analysis of baseline indicators was conducted to produce an in-depth representation of the current food and livelihood security situation in the LAUNCH project areas. Most information presented in the report is broken down by county (Bong and Nimba), and by household food security category.

The household food security categories were constructed using factor analysis to create a composite indicator based on a number of household-level characteristics which were captured in the quantitative survey. Factor analysis enables identification of unique factors that summarize several dimensions of the food security status of households.

The following elements were included in the household food security factor analysis:

- Household size
- Number of different sources of household income
- Value of agricultural sales (LD)
- Number of different assets owned by the household
- Household diet diversity score (HDDS)
- Months of adequate household food provisioning (MAHFP)

The selection of these elements to include in the factor analysis model was based on the understanding that these indicators are designed to capture different dimensions of household food security status.

Results of the factor analysis (provided in Annex 5) were used to identify and compare three distinct levels of food security status among sampled households. The computed values of the principal component (component 1) were ranked and then divided into terciles (three groups with equal number of cases). These categories represent the three levels of food security status among households.

Table 2 reports the mean values of the individual food security indicators broken down into the terciles of the food security index created from the factor analysis model. It is important to note for the interpretation of these results that the survey was conducted just prior to the onset of the main hungry season. The results show a very strong pattern of differences in all the individual food security indicators across the three categories. The patterns of differences are all as expected, with the exception of the MAHFP, which is lower for households in the highest food security category than for those in the lowest category. This may be due to the fact that households in the higher food security category rely more on the sale of cash crops than the production of food crops. In addition, a somewhat smaller proportion of households in the highest food security category live in larger villages compared with households in the lowest food security category. This

Table 2. Household food security indicators by food security category

Food security indicators	Food security category			Total Sample
	Lowest	Middle	Highest	
<i>Household size</i>	2.8	4.2*	5.4*	4.1
<i># HH income sources</i>	2.3	2.7*	3.5*	2.8
<i>Value of ag sales (LD)</i>	71	404*	1,400*	628
<i>Number of HH assets</i>	3.6	5.7*	6.6*	5.3
<i>HDDS</i>	3.6	4.2*	6.1*	4.7
<i>MAHFP</i>	9.7	8.9*	8.3*	9.0
<i>% HH in larger villages^a</i>	16.7	13.0	10.5*	13,4

^alarger villages: Salala, Sanoyeh, Saclepea

*mean value different from the lowest food security group, at the .10 significance level

Sample size was insufficient for robust comparisons of subgroups under the assumptions built into the sample size computation, but information is broken out by these categories for illustrative purposes, and statistical tests for differences across subgroups have been conducted, to see if significant differences can be detected based on the actual distributions found in the subsamples.

1.4.1.6 Limitations of quantitative survey

All quantitative surveys are burdened with two major limitations. The first is that the results of a sample are never a completely accurate reflection of the reality of the underlying population they are drawn from. Inappropriate sampling procedures and poorly designed survey instruments will lead to inaccurate or biased results. However, these problems can be minimized with careful design of the sampling strategy and questionnaire instruments, and effective training of the interviewers. Effective sample design is a tradeoff between precision of results and the necessary effort and resources needed to obtain a sufficiently large and truly random sample. In the context of Liberia, with scattered population centers, very poor transport, obtaining a truly random sample of households was difficult. Three communities that were initially selected could not be included in the sample because they were simply not accessible within the timeframe of the survey. However, except for these extreme situations, every effort was made to ensure a random selection process for villages and households. Furthermore, interviewers were provided with extensive training to ensure the obtained and recorded accurate information. Data was recorded directly into PDAs at the time of the interview to minimize data entry errors.

The second major limitation of quantitative surveys is that they are inherently closed-form. They have specific questions with limitations on the kinds of answers that can be recorded. The types of information that will be collected must be well considered and identified prior to the fieldwork. This means that new information that may come up during the course of fieldwork cannot be captured within the formal survey data collection process. This baseline survey minimized this limitation by first identifying very clearly all the necessary quantitative information needed to be obtained from this baseline in consultation with the project management and the donor. In addition, the baseline includes a qualitative study component, described below, to capture information new information from the field, information that might not have been identified as important prior to the fieldwork.

1.4.2 Qualitative study design

1.4.2.1 Methodology

The qualitative component of the baseline survey was designed to provide a contextual understanding of the key factors that constrain access of the respondents sampled to basic needs in food production, health, nutrition, sanitation, educational advancement and rural employment. Thus topical themes generated for focus group sessions and key informant interviews were designed to provide depth and a more substantive understanding of the dynamics of poverty in the two counties surveyed, and the causal factors that underlie limited access to basic needs in food, health, and education. The nature of gender relations and the differential status of men and women in terms of access to basic resources and intra-household decision making on the management of farm income, allocation of labor for farm and domestic household tasks, infant and maternal health practices, and access to both formal and informal education were explored in focus group sessions. Topical guides were designed as constraint matrices to examine the three key sectors of this study (food security, health, education) and where possible to provide insights around health and nutritional practices and measures on key indicators listed in the IPTT.

The qualitative portion of the baseline study was conducted over a period of 25 days from 22 February to 18 March, 2011. The team consisted of one international consultant, seven representatives from African Development Associates (ADEAS), a private consulting firm in Monrovia, and one M&E staff assistant from ACIDI/VOCA. A list of the qualitative survey team members is presented in Annex 6. The work schedule and field itinerary for both the qualitative and quantitative teams are presented in Annex 7.

Four days were devoted to review of project documentation and preparation of a topical guide, organized by Strategic Objective (SO) and key constraint categories, in order to guide focus group discussions (FGD) and key informant interviews. Revisions and additions to the topical guide, with input from senior staff at ACIDI/VOCA, were made in preparation for the field visit to Liberia. The topical guide was organized into sets of matrices with key constraints categories that include: 1) cultural, 2) economic, 3) knowledge/ informational, 4) institutional/organizational, 5) physical resource, and 6) natural/environmental constraints. The topical guides served as the basis for running focus group discussions (FGD), with two members per FG team. The teams were organized by SO to conduct exploratory discussions of the key constraints faced by communities in the project areas of agriculture, health and nutrition, and education. Thus, the teams were organized to address the following key sectors and stakeholders in the project:

Table 3. Constraints Analysis Matrices

	LAUNCH SO	Key sectors/stakeholders
Team 1	SO1	Men in agriculture; market access; livelihoods
Team 2	SO1	Women in agriculture; market access; livelihoods
Team 3	SO2	Maternal and child Health and nutrition; community health care officials
Team 4	SO3	Parents of school children; school officials

In addition to the FG Constraints Analysis Matrices, the following survey instruments were prepared and revised in-country:

- General Survey with Village Leaders – village infrastructure, food aid and disaster assistance inventories, intra-household decision-making on food security, community health mobilization, improved educational opportunities
- Seasonality Calendars – seasonality of cropping systems, food availability, workloads of men and women, cash flow and credit availability
- Key Informant Interviews – unstructured interviews directed by the international consultant with key county and district level officials in agriculture, health and nutrition, and education.

Examples of the final revised Qualitative Surveys, Seasonality Calendars and FG Constraints Analysis Matrices, are found in Annex 8.

The three-day training session on use of the FG Constraints Analysis Matrices was held in Bong County and directed by the international consultant, followed by a pre-test of the matrices in two villages by the FG teams. As the teams improved their mastery in using the FG matrices, some refinements and improvements were introduced over the course of two weeks in the two counties. Thus, the FG tool and discussions should be viewed as a reflexive learning exercise for the team members who improved and honed their facilitation and interviewing skills during the field survey period. Teams alternated days running FGDs with organizing and rewriting field notes in a legible fashion for the lead consultant. Individual group meetings were also held between the consultant and the teams on alternate days to share field observations and insights gained from the FG sessions.

FGDs in agriculture, and health and nutrition were segregated by gender in order to tease out the differences in perception by men and women of agricultural practices, and women’s knowledge and practice in maternal health, nutrition, and breastfeeding practices. This approach was particularly imperative with regards to certain gender-sensitive topics such as birth control practices, breastfeeding, decision-making between men and women, and access to and control over household resources such as income. Due to the subordinate status of women in the two regions, it was felt that men would dominate mixed FGDs and women would be too reticent to share personal observations of a gender-sensitive nature. Mixed group FG sessions were held when discussing gender relations in General Survey sessions with village leaders.

FG discussions around seasonality calendars and the General Survey were not initiated until near the end of the first week of FG sessions in Bong County, and initially directed by the international consultant. Members of the FG teams then began to direct discussions around seasonality and use of the General Survey during the second week of data collection in Nimba County.

When time permitted, FG teams and the international consultant did abbreviated transect walks through the villages to observe basic physical infrastructure, including hand dug wells, hand pumps, schools, village health clinics, pit latrines, market stalls, kitchen grain storage areas, and central gathering points for village meetings where anthropometric measurements by the quantitative team were often conducted. Due to long distances to village fields, the team could only observe upland and lowland fields in passing while in transit in the team vehicles.

Key informant interviews were directed by the international consultant, and involved an open, unstructured exploratory discussion with government officials concerning key constraints and problems identified in the three project sectors during the course of the FG sessions. A list of key informants interviewed is found in Annex 9.

Upon completion of all FG and individual interviews, the international consultant synthesized field notes and data collected to present preliminary observations and findings (key constraints in each sector activity) from the qualitative field sessions and recommendations (in Power Point format) to senior LAUNCH staff in a half-day session on the last day in country, 18 March.

1.4.2.2 Sampled Villages

Qualitative baseline data was derived from FG sessions in 12 villages and 2 pre-test villages. A total of 35 FG sessions were held, with discussions averaging 8-12 participants per FG. Additional instruments included 8 General Survey FG discussions with village leaders, 4 FG Seasonality Calendar discussions, 17 key informant interviews, and 2 group meetings with LAUNCH senior project staff in Monrovia. The qualitative interactions above totaled 66 individual or group sessions (Annex 10).

The sampling of 14 villages (including two pre-test) selected for the FGDs was conducted opportunistically to correspond with the quantitative village sample. Due to logistical constraints (limited number of vehicles), poor roads, and the remote location of many villages, the qualitative and quantitative teams traveled together to conduct data collection and FG sessions in the same communities. This had the advantage of enabling the qualitative team to contextualize the hard data findings from the quantitative survey.

1.4.2.3 Limitations of the Qualitative Study

The methodological approach taken in carrying out the qualitative portion of the survey was to focus on key areas of constraint that have undermined the capacity of rural communities to attain secure levels of food provisioning for their families, maintain sufficient levels of health and nutrition among women and children, and foster opportunities for educational achievement and employment of youth. During the course of the village visits, the teams were also able to obtain a rapid, albeit superficial, assessment of the overall socio-economic status of villages, including their capacity to respond to natural and human-induced disasters such as extreme climate shocks, or the residual longstanding effects from the Liberian civil war, and their histories of development assistance and levels of interaction with external donor and government institutions. A critical underlying feature in the socio-economic inventory of these communities was an assessment of gender relations and the distinct roles and responsibilities that men and women share in the multifaceted dimensions of their lives.

It is hoped that the contextual information from the communities visited will assist the LAUNCH partners in the appropriate selection of those communities most in need of program assistance. However, a caveat must be drawn in attempting to extrapolate broadly from the limited number of qualitative observations drawn from the communities visited, which does not represent a statistically valid sample of the overall population from the two counties. It is highly probable

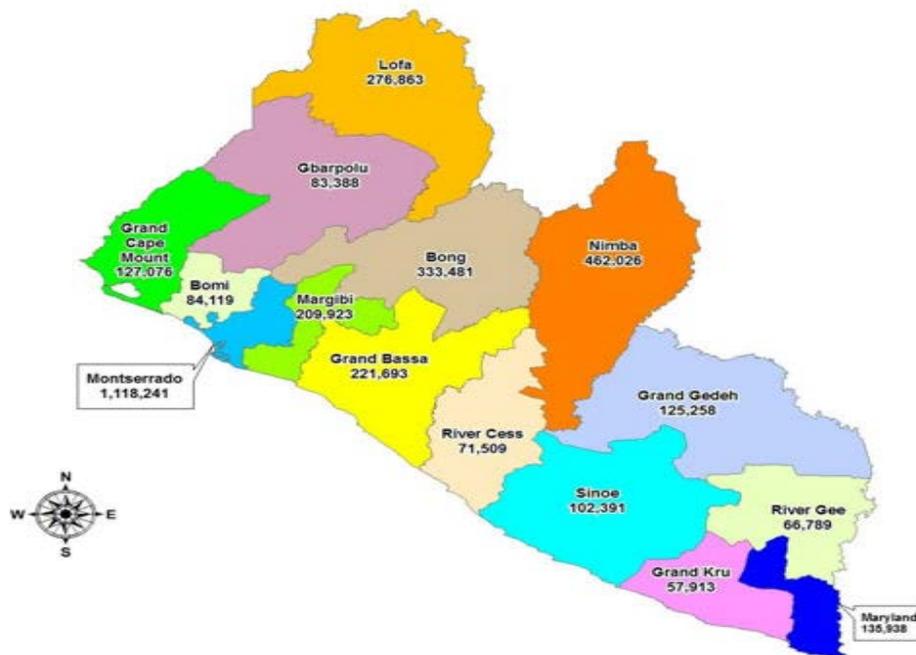
that many communities share some basic agro-ecological and infrastructural features in common, such as highly diversified upland and bottomland cropping systems, and relatively poor quality of physical resources such as schools, clinics, latrines, and water supply. The status of household assets, as documented in this study, is also relatively low. Nonetheless, communities are stratified by many socio-economic, cultural, and physical variables, and these differences will need to be assessed and parsed out carefully by the LAUNCH project team, based on a set of objective criteria, in order to make a balanced, representative selection of communities to participate in the project.

2.0 General survey population characteristics

2.1 Geography

The geographical areas targeted for development assistance under the LAUNCH initiative, Bong and Nimba Counties, represent the two most populous counties (excluding Montserrado County and the capital city, Monrovia) of Liberia, making up roughly one-quarter of the national population (Figure 3). Bong County is comprised of twelve districts, of which LAUNCH has targeted two for program intervention, while Nimba County has seventeen districts, four of which have been targeted under the project.

Figure 3. County population, Liberia



Source: Republic of Liberia. *2008 National Populations and Housing Census Final Results*. Liberian Institute of Statistics and Geo-Information Services (LISGIS), May 2009.

The two counties played a critical role during the decade of civil war, and were heavily contested areas of conflict, experiencing massive losses of life and egregious human rights abuses, particularly perpetrated against women and girls. Thus, the scars of war in terms of major loss of infrastructure and dislocation of farm life and rural livelihoods linger, and can still be felt today. Gbarnga, the capital and administrative seat of Bong County, served as the base of rebellion by

Charles Taylor against the Presidency of Samuel Doe in the early 1990s.¹¹ The county was contested by multiple militias during fourteen years of civil war, and many male adolescents were forcefully conscripted as child soldiers from the region. In FG discussions held in both counties, respondents chronicled the ravages of the war in their communities, including large losses of animals, crops, torching and looting of homes, some instances of rape, forced conscription of young men as soldiers, and the loss of life, most often due to malnutrition and illness from food scarcity. The effects were particularly acute in Salala, a village in Bong County.

Despite the calamity of war throughout the region, both Bong and Nimba Counties still hold out promise for future development, possessing a vast reserve of natural resources including gold, diamonds, iron ore, and timber. The two regions are well endowed with lush vegetation and dense tropical forest, including two zones of evergreen rain forest and moist semi-deciduous forest. Rains are abundant, averaging at least 70 to 80 inches per annum.^{12, 13}

The Kpelle and Bassa make up the ethnic majority in Bong County, while Nimba County has a mix of predominantly Mano, Gio, Krahn, Gbi, and Mandingo groups. Christianity is practiced by the majority of the population, while Islam makes up a significant religious minority. FG discussions on religious rivalries and tensions suggest that people live in relative harmony despite their religious differences.

One recent development with potential to disrupt social conditions in Liberia, particularly in Nimba, is the social unrest in neighboring Cote d'Ivoire. However, at the time of the baseline survey, the impacts of this unrest do not seem to be widespread on the resident communities in Liberia. The household questionnaire asked households if they had any refugees from Cote d'Ivoire join their households in the last 3 years. Only four households (all in Nimba) reported affirmatively to this question.

2.2 Surveyed Population

Table 4 reports the breakdown of the population in the surveyed households by age category and by gender. In the baseline sample the ages of almost 9 percent of the household members were not known. The sample of the baseline survey has a higher proportion of U5 children than the 2007 Liberia Demographic and Health survey, while the proportion of 10-14 year olds and over 65 years is lower in the baseline than the LDHS. The proportion of females in the baseline sample is larger than males, as is the case in the LDHS, although imbalance between the genders is more pronounced in the baseline sample.

¹¹ http://en.wikipedia.org/wiki/Bong_County

¹² Republic of Liberia *Bong County Development Agenda, 2008-2012.*

¹³ Republic of Liberia *Nimba County Development Agenda 2008-2012.*

Table 4. Surveyed population distribution by age category and gender, baseline survey and Liberia Demographic and Health Survey, 2007

Age Category	Baseline Survey			LDHS (Rural)		
	Male	Female	Total	Male	Female	Total
0-4	30.4	23.8	26.7	20.6	18.7	19.6
5-9	17.1	12.8	14.7	17.4	16.6	17.0
10-14	7.7	5.6	6.5	12.9	10.8	11.9
15-24	8.1	16.1	12.6	12.8	14.1	13.5
25-64	26.4	31.5	29.2	32.4	35.8	34.0
65+	2.0	0.8	1.3	4.0	3.8	3.9
Don't know	8.2	9.4	8.9			
N	1,390	1,732	3,122	10,365	10,516	20,881

Figure 4: LAUNCH Baseline Survey, Total HH and Caregivers of U2 children interviewed by county, village

County	Village	HH	Caregivers of U2 children
Bong	Malunga/Yaquala	25	5
	Baysah Farm	32	15
	Neneborlormue	30	20
	Salala	26	16
	Macgill Farm	29	16
	Bencorma	31	19
	Tokpaipolu	25	15
	Wennie Ta	26	17
	Sanoyeh	26	14
	Gbamokollie Ta	30	15
	Len Wulu Ta	30	16
	Gbono Ta	26	19
	Total - Bong		336
Nimba	Payee	25	16
	Garwonpa	30	19
	Nyeanyee	28	17
	Karmenpa	30	15
	Saclepea	25	12
	Saclepea	25	13
	Duo Gorton	25	8
	Boaplay	30	17
	Gotowin	30	11
	Bahn	30	16
	Duowin	25	11
	Zontuo	25	12
	Behyepea	30	19
	Rlekporlay	30	20
	Gbormieplay	30	14
	Total - Nimba		418
Total sample		754	407

3.0 Household Food Security Conditions

The overall goal of the LAUNCH project is to promote “improved food security of vulnerable people in Bong and Nimba Counties”. In the Performance Measurement Framework (PMP), the project has established three impact indicators to measure household food security status at the household level – household dietary diversity score (HDDS), months of adequate food provisioning (MAHFP), value of household assets, and two anthropometric measures – percentage of underweight children and percentage of stunted children, to measure different dimensions of food security status of households.

The household dietary diversity score is a measure of household food security status recognized by Food for Peace, using the procedures to calculate defined by FANTA¹⁴. This measure is based on the very strong empirical relationship between household dietary diversity and income level. Following the FANTA guidelines, households are asked whether anyone in the household ate each of 12 different food categories during the day or night prior to the interview. The score is the total number of categories reported. The months of adequate household food provisioning (MAHFP) is another indicator of household food security recommended by Food for Peace.¹⁵ Household ownership of assets is also highly correlated with income, and therefore access to food. Asset ownership is also a measure of a household’s level of resiliency, the extent to which the household has resources to cope with shocks which may restrict household access to food.

Table 5 provides a breakdown of the household-level food security indicators by food security category and by county. The left-hand side of the table shows that the food security categories computed with the factor analysis model clearly separate the sampled households according to each of these individual food security indicators. The table also shows that food security conditions are generally somewhat better in Nimba compared with Bong. In particular, the average asset index per household is about 40% higher in Nimba than in Bong.

Table 5. Economic and food security indicators, by food security category and county

	Lowest	Middle Mean	Highest	Bong	Nimba Mean	Total
HDDS	3.6	4.2*	6.1*	4.4	4.8*	4.6
MAHFP	9.7	8.9*	8.3*	8.9	9.0	9.0
# of assets/HH	3.6	5.7*	6.6*	5.1	5.4*	5.3
Asset index ¹	128.4	217.2*	308.1*	179.6	251.9*	219.6
<i>N</i>	248	247	248	339	418	757
	<i>*mean value different from the lowest food security group, at the .10 significance level</i>			<i>*mean value different from Bong at the .10 significance level</i>		

¹ See Annex 11 for the coefficients used to compute the asset index.

More detailed information about livestock ownership is provided in Table 7Table 6. This table shows that households in the higher food security categories are more likely to have livestock, but

¹⁴ Household Dietary Diversity Score (HDDS) for Measurement of Household Food Access (VERSION 2), FANTA, September 2006.

¹⁵ Months of Adequate Household Food Provisioning (MAHFP) for Measurement of Household Food Access, FANTA, June 2007,

that the average number of different types of livestock per household is not very different across the food security categories. A higher proportion of households in Nimba have livestock, compared with Bong.

Table 6. Percent of households owning different types of household assets

	Lowest	Middle	Highest	Bong	Nimba	Total
		%			%	
Bed	17.6	25.1*	28.6*	23.7	23.7	23.7
Radio	19.2	33.6*	39.9*	30.6	32.1	31.4
Phone	15.5	31.2*	43.1*	27.6	32.1	30.1
Cutlass	45.3	73.3*	87.5*	70.0	67.6	68.7
Table	24.1	40.9*	50.0*	34.4	41.7*	38.5
Coalpot	17.1	19.4	18.5	17.5	18.9	18.3
Generator	0.4	2.8*	3.2*	0.9	3.4*	2.3
Wheelbarrow	0.4	1.6*	8.1*	2.1	4.6*	3.4
Chair	30.6	53.0*	57.3*	50.1	44.8	47.2
Bucket	60.0	90.7*	94.8*	82.2	81.1	81.6
Bicycle	0.4	1.6*	1.2	1.2	1.0	1.1
Motorcycle	2.0	4.0*	8.5*	3.3	6.5*	5.0
Mattress	42.4	63.2*	70.2*	49.3	66.2*	58.6
Pots	66.1	93.5*	98.0*	86.4	85.4	85.8
Hoe	18.0	36.0*	47.6*	31.2	35.7	33.7
<i>N</i>	245	247	248	337	417	754
<i>*mean value different from the lowest food security group, at the .10 significance level</i>				<i>*mean value different from Bong at the .10 significance level</i>		

Table 7. Livestock ownership, by food security category and county

	Lowest	Middle	Highest	Bong	Nimba	Total
		%			%	
% of HHs owning any livestock	21.6	32.8*	40.3*	26.4	35.7*	31.6
<i>N</i>	245	247	248	337	417	754
Mean number of livestock owned						
Cattle	0.08	0.02	0.09	0.00	0.10*	0.06
Goats	1.00	0.49	0.79	0.40	0.92*	0.73
Sheep	0.36	0.23	0.18	0.10	0.32*	0.24
Chickens	4.08	5.28	6.65	5.25	5.79	5.58
Pigs	0.72	0.68	0.85*	0.37	0.97*	0.75
<i>N</i>	53	81	100	89	149	238
<i>*mean value different from the lowest food security group, at the .10 significance level</i>				<i>*mean value different from Bong at the .10 significance level</i>		

Overall, these indicators present a picture of general food insecurity in the project intervention area. There is a wide range of variation in the food security and vulnerability status of households

within the project area. Households in the lowest food security category have HDDS and asset index values around half of households in the highest category. There are no marked differences across the two counties, with the exception that a higher proportion of households in Nimba have livestock.

4.0 Strategic Objective 1: Increased Availability of and Access to Food Among Vulnerable Rural Populations

The LAUNCH project seeks to improve the overall food security status of the most vulnerable segments of the population in Bong and Nimba Counties. To achieve this overarching goal, the first pillar of the project aims to increase the availability of and access to food under SO1 through a range of activities designed to boost crop productivity by improving farm methods, reducing post-harvest crop losses, improving access to critical inputs in seed, fertilizer, and credit, and mobilizing producers to more efficiently market their crops.

4.1 Household food security

In assessing the factors affecting the food security conditions of households, it is first necessary to provide an overview of the rural cropping systems and associated livelihoods that sustain smallholders in both counties, since these serve as the basis in meeting the consumptive food requirements of rural households. Seasonal patterns in food supply and income will ebb and flow according to production calendars that are dependent upon water availability and the oscillation between wet and dry seasons. Seasonality is particularly critical to the overall health and nutritional status of rural farming communities, and will therefore be explored in some detail below.

4.1.1 Farm Cropping Systems

Liberia's agricultural systems are characterized overall by four production systems¹⁶: 1) foreign-owned commercial plantations producing perennial export crops, the most important of which are rubber and palm oil, 2) state-owned plantations such as the Liberian Palm Products Corporation and the Liberian Cocoa and Coffee Corporation, 3) domestically owned, medium-sized commercial farms producing industrial crops (primarily tree crops) for export and livestock for the local market, and 4) small traditional household farms using low-capital inputs and rudimentary farming methods.

The smallholders targeted for assistance under LAUNCH fall into the last category as subsistence farmers, some of whom also cultivate tree crops on a commercial basis. The agro-ecology and production regimes for both Bong and Nimba Counties are similar, and are characterized by a high diversity of crops and cultivars, and production calendars that overlap temporally. Variations in crop regimes and non-cropping livelihoods may occur due to the localized nature of topography and landscape, but in general most smallholders engage in a mix of one or more of the following production systems:

- Swampland rice and vegetables
- Upland field crops including rice, roots, tubers, and legumes
- Tree crops (rubber, cocoa, palm oil, coffee, kola)
- Fishing
- Livestock

¹⁶ FAO/WFP. *Crop and Food Security Assessment for Liberia*. Monrovia, 27 February, 2006.

Rice is cultivated as the primary food staple in both upland and lowland swamp areas, and plays a central role in the national Liberian diet. As one food security assessment notes, "...people who have not eaten rice will say that they "have not eaten."¹⁷ Farmers in FG discussions note that the primary advantage of growing swamp rice is the shorter growing cycle of three-month varieties, allowing for multiple rice harvests in given year, as well as requiring less labor, while upland rice requires considerable clearing of brush and tree felling.

The smallholder systems are characterized by low productivity of land and labor, with crop yields being relatively low. Upland shifting cultivation, or swidden farming, is based upon a traditional system of rotating or 'slash and burn' agriculture in which forest fields are cleared and burned for cultivation for a one to two year period, and then left to return to bush fallow for eight to ten years. Respondents in FG sessions frequently noted that the period of fallow has now declined to three to five years, as a result of growing population pressure and the growing need for land.

Upland systems feature a rich mosaic of cultivars, the most important of which are rice and cassava. These are intercropped with a mix of roots, tubers, and legumes, and include plantains, corn, eddoes, sweet potatoes, yams, broad beans, pigeon peas, mung beans, peanuts, and sesame.

Vegetables, most often grown around the perimeters of the rice bottomlands, are numerous and include hot pepper, okra, eggplant, African eggplant ("bitter ball" or "garden egg"), tomato, cucumber, and palava leaves. Fruits are less common, but include pineapple, oranges, banana, coconut, papaya, lime, and mango. Vegetables and fruits are cultivated principally as cash crops, while the leaves of cassava and palava, potato greens, bitter ball, and okra are commonly used for preparation in local sauces.

The most common cash crops, cultivated almost exclusively by men, are rubber, cocoa, palm oil, coffee, kola nuts, and sugar cane. Some men specialize in vegetable gardening on a large commercial scale as their primary farm livelihood, while women's gardening for market exchange is most often on a very small scale.

As in most of Africa, there is a clear gendered division of labor in field tasks, with men doing the heavy physical labor, such as "brushing" or clearing the bush, felling trees, and burning fields, while women are involved in "scratching" (sowing), weeding, and harvesting. Men and women share some tasks in common, such as weeding and harvesting, depending on field size.

Men and women noted in FG discussions that, with the exception of tree cash crops such as rubber, they most often share in the labor of family fields that are cultivated largely for subsistence needs. However, women do cultivate some "women's crops", specifically cassava, beans and vegetables in what are termed "backyard gardens" that include corn, broad beans, pepper, eggplant, cucumber, sweet potatoes, and bitter ball.¹⁸ Along with some small field plots of cassava, peanuts, sweet potatoes, plantains, yams, and eddoes, these crops are grown for both consumption and to generate petty income in the market. Some of these crops, such as cassava, are dried and ground into a fine flour (gari), and provide an important source of income well into the dry season.

4.1.2 Secondary Rural Livelihoods

Livestock production in the form of small animal husbandry constitutes an important form of asset diversification that supplements farming and provides an economic buffer and form of

¹⁷ Ibid. p. 25.

¹⁸ Ibid.

savings investment for small farm households who must liquidate animals during periods of distress, particularly during the lean season or when debts must be repaid. Respondents in FG sessions noted that men most often manage larger ruminants, such as sheep, goats, and pigs, while women tend to be responsible for raising small poultry such as chickens, ducks, guinea fowl, and guinea pigs. Many animals were decimated during the war, thus there has been a reticence on the part of many of the communities to reinvest in rebuilding herd stocks, particularly cattle, sheep, and goats, due to the persistence of various diseases and lack of access to any veterinary services which are virtually non-existent in the areas visited. There is a notable absence of cattle that were stolen during the war. Most cattle in Nimba County are brought by Fulani herders seasonally from Guinea to the village markets for sale.

Most animals are raised as a social rather than capital investment, slaughtered sparingly for various social events such as weddings, funerals, and religious ceremonies or holidays. They are also sometimes used to feed the traditional labor groups, or *kuu*, especially chickens. Women raise chickens that are often eaten when hosting guests or special visitors. Thus, aside from a few individuals who specialize in livestock production, animals are rarely raised for purely commercial purposes.

Sometimes men raise goats and sheep for market sale and can earn a reasonable income. One men's FG noted that in their district (Saclepea Mah), a large sheep can earn up to US \$100 and goats up to US \$75 during holiday periods such as Christmas and New Year. Small hogs can earn about US \$40 to \$50, roosters \$4 and hens \$3. Respondents noted that chickens are highly prone to disease and often do not survive.

Livestock production requires fencing in the more densely populated rural areas where grazing lands have become constrained. Few individuals interviewed were willing to erect fencing to raise goats, sheep, or cattle due to the costs and labor time investment required. Open grazing of these animals is generally banned in urban and peri-urban areas due to lack of space and destruction of crops, thus hindering livestock production as a viable small farm enterprise activity in the larger towns and surrounding areas.

In addition to small ruminants and poultry, fishing is an important livelihood activity for some communities, depending on their location and distance to rivers and streams. In some villages visited, women tend to fish during the dry season, from January to March, in swamp bottomland areas primarily as a subsistence activity, while men are more engaged commercially in fishing year round, accessing streams to catch fish for sale in local markets. Women are often seen in markets selling small quantities of dried fish, while fresh fish (sardines) from the ocean are shipped up country and stored in cold rooms for sale in the large market towns. Elderly women who are no longer able to farm physically, frequently engage in fishing. Women use traditional round nets of woven-palm and fish traps, while men use hooks, lines, and traps.¹⁹

There is also some limited hunting by men who use dogs, traps, and rifles or sticks to kill the game. The most frequently hunted game includes hedge hogs, squirrels, porcupine, and small forest deer. Women clean, cook, and sell the bush meat, often dried, in local markets. Foraging for forest snails is an important activity for some women who earn some petty income from the sale of snails in the larger market towns.

¹⁹ Ibid.

Table 8. Income generating activities (IGA) carried out by men and women

Income Generating Activities	
Women	Men
<ul style="list-style-type: none"> • Wage or contract labor in the fields sowing, weeding and harvesting, paid in cash or kind (rice) 	<ul style="list-style-type: none"> • Wage labor earned as rubber tappers and clearing land for rice farms (brushing and tree felling)
<ul style="list-style-type: none"> • Petty trade selling agricultural products in local markets and buying dry goods to resell in the community 	<ul style="list-style-type: none"> • Petty trade in dry goods
<ul style="list-style-type: none"> • Some limited production and bagging of charcoal as wage laborers 	<ul style="list-style-type: none"> • Felling trees to sell firewood and make charcoal
<ul style="list-style-type: none"> • Processing and marketing palm oil 	<ul style="list-style-type: none"> • Producing and selling palm wine
<ul style="list-style-type: none"> • Producing and selling sugar cane liquor 	<ul style="list-style-type: none"> • Artisanal trades such as masonry and carpentry

In supplementing on-farm livelihoods, it is known that off-farm remittances exist, and that some families in Bong and Nimba County have relatives who have immigrated to the US. The role and importance of remittances was never identified in FG discussions. One source noted that those families receiving money from migrants in the US generally move to larger towns and do not remain in the villages. One study notes that communities are reluctant to discuss the existence of remittances which may be a sensitive topic due to the pervasive nature of poverty throughout Liberia.²⁰ A summary of the myriad livelihoods commonly practiced in the LAUNCH project area described above is presented in table format below.

Table 9. Livelihood Activities in Bong and Nimba Counties

Primary Activity - Agricultural Production	
Food crops	Staple starches: rice, cassava, plantain, eddo, sweet potato, yam Legumes: broad beans, pigeon pea, mung beans, peanut, sesame Vegetables: hot pepper, okra, eggplant, bitter ball, tomato, cucumber, palava Fruit: pineapple, oranges, banana, coconut, papaya, lime, mango
Women's gardens	Corn, hot pepper, okra, eggplant, bitter ball, tomato, cucumber, broad bean, pigeon pea, onion, palava
Secondary Activities	
Cash crops	Commercial tree crops: rubber, cacao, oil palm, coffee Secondary cash crops: coconut, sugarcane, kola nut, oranges, pineapple
Sales of agricultural Products	Rice Cassava: in various forms (flour, gari, fufu, domboy, roasted, and the unprocessed root). Also: palm oil, plantain, eddo, corn, sweet potato, beans, banana, pineapple, cassava and sweet potato greens, women's vegetables
Livestock	Men: cattle, goats, sheep, pigs Women: chickens, ducks, guinea fowl, guinea pigs
Hunting, gathering, fishing	Men: hedge hogs, squirrels, porcupine, and small forest deer; stream fishing Women: snails, fishing swamp bottomlands
Petty trade	Men and women: sell agricultural products and palm oil, and then buy dry goods to resell in the community.
Wage labor	Men: farms labor, transport goods, rubber tappers Women: farm labor, transport goods

²⁰ Ibid.

Charcoal making	Men: fell trees to make charcoal Women: break the charcoal into chunks and bag them and bag them.
Other	Men: cut and sell firewood; make and sell fish traps; work part-time at trades such as masonry and carpentry Women: make and sell fish traps; weave baskets and trays; make and sell pastries, doughnuts, bread, and sweet bread

Adapted from FAO/WFP *Crop and Food Security Assessment for Liberia*. Monrovia, 27 February, 2006.

4.1.3 Seasonality and Household Food Security

Several FG sessions explored the seasonal nature of cropping systems and other livelihood activities. This is essential in understanding the nature of vulnerability and those periods during which households are at greatest risk of food scarcity and exposure to illness due to compromised health status from a lack of food. The seasonal nature of food availability, in relation to work burdens, cash liquidity, and debt obligations was explored in several FG sessions using a seasonality diagram. An illustrative example of the seasonal dimension of production, labor, income, and debt repayment patterns is provided in Table 10 below.

Crop productivity and levels of food security and vulnerability are a function of rainfall and seasonal wet and dry periods. The rainy season generally lasts from mid-April to mid-October, and is followed by a dry season that begins in November and ends in April. During the site visit for this study, intense rains had arrived early and were beginning to pose problems for farmers who were delaying the burning of field brush and the clearing of fields for the upcoming planting season. Many had expressed concerns that such delays pose serious risks for the timely planting and gestation of rice and other upland crops and could result in poor harvests and severe food shortages. Respondents noted in many FG sessions that the onset and duration of rains has been changing with time, with rains arriving too early or becoming more uneven in their distribution pattern. Several women noted that after the seeding of rice in their swamp bottomland fields, dry sunny intervals with no rain during the peak of the wet season would ‘burn’ their rice seed, leading to very poor rice harvests. Thus, changes in seasonal and inter-annual variability in rainfall patterns observed by some of the older community members are consistent with general projections of climate change in Africa in which one can anticipate more irregularity and uneven distribution in rainfall, and increasing patterns of change in the magnitude, frequency, and distribution of rainfall throughout the continent. For areas of West and Central Africa that practice swidden agriculture, this can mean delays in field clearing and planting due to late rains as observed during the baseline study, and result in shorter growing periods and increasing risks of poor crop harvests.

Table 10. Seasonal dimensions of food security

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Meteorological Conditions													
- Precipitation					Rainy season								
- Temperature	Cool				Hot							Cool	
Production & Labor Time Allocation													
- Upland rice	Brushing (field clearing)			Planting	Guarding	Weeding, Guarding		Guarding	Harvest, Threshing		Consumption, Sale		
- Upland cassava, roots, tubers, legumes	Drying	Brushing	Planting		Weeding			Harvest	Harvest				
- Swamp Rice		Brushing		Brushing		Planting		Weeding	Guarding	Guarding	Guarding	Harvest	
- Vegetables	Brushing		Planting	Weeding		Harvest			Consumption, Sale				
Seasonality of Food Stocks													
- Rice	Medium			Low	Lean Period/Hunger Season				Low	High			
- Cassava, roots, tubers, legumes	Low			Medium	High				Medium	Low			
- Vegetables	Low					Medium							
Seasonality of Labor Burdens													
- Men's field labor	High					Low	Medium	No field activity		Low	Low or no activity		
- Women's field labor	Low		Medium	High		Medium	Low	High					
- Seasonality of Cash Liquidity and Debt													
- Crop harvest and sales						Cassava, vegetable crop sales				Rice crop sales			
- Repayment of loans/debt level										Debt repayments (cash, in kind)			
*Color codes for labor inputs	High labor demand			Medium labor demand			Low labor demand			No activity			

The quantitative assessment of a lean period, or ‘hunger’ season that lasts approximately three-months corresponds roughly with the information provided in FG sessions. Respondents generally estimated their hunger season to occur over a three to four month period, from May to August during the peak of the rainy season when food stocks, particularly of rice, are drawn down and fully depleted during this period. This is the most vulnerable period of the year for households in both counties. As rice stocks are drawn down, families rely heavily on cassava as their main staple to get them through this lean period. Cassava planting involves two varieties, a shorter three-month cycle white variety (termed ‘bassa’ girl’), and a longer six-month cycle red variety that enables smallholders to harvest cassava well into the wet season and the peak of the hunger period. Thus cassava, along with bush yams, is associated as a hunger food that enables families to survive when rice stocks have been fully depleted during the rainy season.

The seasonal labor demands of men and women are somewhat bifurcated, with women’s peak work load occurring during the height of the wet season when the planting and weeding of rice in the swamp bottomlands occurs, which is a labor intensive activity. This period of peak labor demand places some women’s health status at risk since food stocks of rice are low or depleted, and women must rely on less nutritious food staples such as cassava during a period of heavy labor demand. This is particularly the case for elderly widowed women and younger women who are nursing their children while working in their fields. Conversely, men’s peak labor demand occurs during the dry months with tree felling and bush clearing from January to May. This period overlaps with adequate food stocks of rice well into the dry season, thus enabling men to optimize their caloric output for heavy field tasks during a period of relative food security.

Cash liquidity and debt repayment periods generally occur during the main rice harvest period from October through December when rice is used to reimburse debts for borrowed rice seed or other financial debts. Due to the abundance of rice in the market at this time, rice prices are low which work to the disadvantage of those with substantial debts. Some male FG respondents in Nimba County noted that they have more income during the dry season (October - April) from the sale of palm nuts.

The rainy season, when hunger becomes most pronounced, is also a period of relatively low income availability for many smallholders in the study region. Most crops are not harvested during this period (e.g., palm nuts for making oil), and the situation is further exacerbated by poor access to markets due to impassable roads. At a time when cash liquidity is low, transport fares rise due to poor road conditions. Thus the marketing of crops becomes very difficult and household incomes, particularly those of women who do not farm tree cash crops, declines. It is also important to note that the outbreak of disease among poultry and small livestock also increases during the rainy season, further eroding household income earning capacity during the most vulnerable period of the year.

Seasonal patterns of illness, some of which spike during the wet season, further undermine the health and nutritional status of the most vulnerable well into the hungry lean season. The temporal dimensions of illness and vulnerability are explored in further detail in the health and nutrition section of this report under SO2.

4.1.4 Household Dietary Diversity

Dietary diversity constitutes one of the most important measures of the state of overall health and well-being within the general population. As noted, rice serves as the primary staple of rural households in Liberia. While a rich array of cereal crops, tubers, roots, legumes, and vegetables were observed in local markets, local diets are heavily concentrated in starchy crops (rice, cassava, yams, plantains) with hot pepper, sweet potato, and cassava greens as the principal sauces. Fish is much more frequently consumed than meat as the principal source of protein, as meat is expensive to buy in the markets.

While a spectrum of vegetables are grown, they are oriented toward the larger town markets and consumed less in the small rural villages. Vegetables are grown in the rice swamp areas in residual bodies of low-lying water after the rice harvest season from December to March. They are also grown from November to January along river banks. The most profitable vegetables and garden crops grown are hot pepper, bitter ball, cabbage, watermelon, and cucumbers. Due to the remoteness of many villages and long distances to markets, middlemen often come to the more distant villages to buy the produce at prices dictated by the buyers, much to the disadvantage of the vegetable producers.

4.1.5 Crop Production

Findings from the quantitative survey reveal that less than half of all households in the LAUNCH project area reported that they are engaged in agricultural activities (see Table 11). This is partially explained by the fact that the survey included three quite large towns (Sanoyeh and Salala in Bong, and Saclepea in Nimba). In these larger towns, only 38 percent of households were engaged in farming activities. Of the households not engaged in agricultural production, almost 45 percent reported that they were engaged in the trade of agricultural products, 45 percent were engaged in casual labor, 27 percent in petty trade, 14 percent in skilled labor, and 13 percent in small business activities. The middle food security category has the highest proportion of farming households. There is no significant difference in the proportion of farming households between Bong and Nimba.

Farming households were asked to identify all the different types of crops they grew over the last year, from a list of twelve different types of crops. Overall, the average number of crops grown by surveyed households was very low, at 2.3 per household. The households in the highest food security category reported growing more crops, but even for this group the average number was only 2.5 crops per household.

Sales of agricultural crops shows a very marked correlation with food security status – a much larger proportion of households in the higher food security categories reported sales of crops, and the reported value of crop sales was much higher. The average value of crop sales of the highest category, over 3,000 LD, is over 15 times higher than the average value of the lowest category. The patterns of household crop sales are almost identical between Bong and Nimba Counties.

Table 11. Percent of households engaged in farming, number of crops grown and crop sales, by food security category and county

	Lowest	Middle Mean	Highest	Bong	Nimba Mean	Total
% Farming HH ^a	38.8	51.4*	46.4	47.5	45.8	46.5
<i>N</i>	245	247	248	337	417	754
# crops grown/HH ^b	2.0	2.1	2.5*	2.2	2.3	2.2
%HH selling crops ^b	8.4	25.2*	29.6*	21.3	20.9	21.1
Value crop sales (LD) ^b	183	786*	3,020*	1,419	1,345	1,378
<i>N (farming HH)</i>	95	127	115	160	191	351
<i>*mean value different from the lowest food security group, at the .10 significance level</i>				<i>*mean value different from Bong at the .10 significance level</i>		

^aHH reporting at least one HH member engaged in agricultural activities

^bcomputed for HH engaged in farming.

Farmers were asked how their agricultural production had changed over the past three years, and the reasons for the reported changes. The results are provided in Table 12 and Table 13. Table 12 shows an

interesting pattern of differences across the three food security categories. A much higher proportion of households in the lowest category reported no change in production over the last three years, while greater proportions of households in the higher categories reported both increases and decreases in agricultural production. Patterns of change are quite similar between Bong and Nimba.

Table 12. Change in agricultural production over last 3 years, by food security category and county

	Lowest	Middle	Highest	Bong	Nimba	Total
	%			%		
Increased	8.4	16.5*	19.1*	14.4	16.2	15.4
Stayed the same	76.8	59.8*	45.2*	56.9	62.3	59.8
Decreased	14.7	23.6*	35.7*	28.8	21.5	24.8
<i>N</i>	95	127	115	160	191	351
<i>*mean value different from the lowest food security group, at the .10 significance level</i>				<i>*mean value different from Bong at the .10 significance level</i>		

Table 13 provides the reported reasons for both increases and decreases in agricultural production, ranked by the frequency of response. The main reasons for increased production are increases in availability of the main factors of production – land and labor, and better weather conditions. Improved access to tools and improved production practices are less important, and improved road infrastructure was hardly mentioned. Main reasons for decrease in agricultural production are decreases in soil fertility, but also importantly, lack of or poor quality of tools. Lack of tools seems to be a very important factor limiting agricultural production in Bong and Nimba Counties. Lack of access to good quality seeds was also a quite frequently cited reason for decrease in agricultural production.

Table 13. Reasons for increased and decreased agricultural production

Reasons for Increased production	% HH	Reasons for Decreased production	% HH
More area planted	40.7	Diminished soil quality	43.2
Good rains/weather	37.0	Poor quality/lack of tools	42.5
More labor	37.0	Less labor	41.4
Other	33.3	Other	36.8
Improved/more seeds	24.1	Poor quality/lack of seeds	27.3
Better access to water	22.2	Less area planted	18.4
Improved crop management	14.8	Poor/irregular rains/weather	14.9
Access to cleared swamplands	14.8	Decreased access to water	5.7
Improved/more tools	7.4		
Use of fertilizer	5.6		
Improved roads/bridges	1.9		
<i>N</i>	54	<i>N</i>	87

While Table 12 and Table referred to past changes in agricultural production, and reasons for the changes, Table 14 refers to what farmers consider to be current constraints to increased agricultural production. Lack of tools is the most frequently cited reason, and this reason is cited most frequently by farmers in the

lower food security categories. Lack of seeds and lack of access to labor are the next most frequently cited constraints on production. Interestingly, lack of access to land is cited more frequently by farmers in the higher food security categories than those in the lowest category (the difference is statistically significant only for the middle category).

Table 14. Greatest constraint to increased agricultural production, by food security category and county

	Lowest	Middle %	Highest	Bong	Nimba %	Total
Lack of tools	52.6	30.7*	39.1*	40.0	38.7	39.3
Lack of seeds	13.7	9.4	21.7	14.4	16.2	15.4
Not enough household labor	7.4	15.7*	13.0	15.6	8.9*	12.0
Cannot hire labor / hired labor too expensive	10.5	18.1	7.0	9.4	14.1	12.0
Lack of access to land	6.3	14.2*	11.3	8.8	12.6	10.8
Lack of credit to purchase tools	3.2	7.9	4.3	5.6	6.3	6.0
Too busy in other activities	3.2	3.1	2.6	4.4	2.1	3.1
Lack of road access to markets	3.2	0.8	0.9	1.9	1.0	1.4
<i>N</i>	95	127	115	160	191	351
<i>*mean value different from the lowest food security group, at the .10 significance level</i>				<i>*mean value different from Bong at the .10 significance level</i>		

Table 15 reports changes in sales of agricultural crops over the last three years. Note that the total number of households with agricultural sales is low, only 99 households in the entire sample. Because of the relatively small number of cases, there are no clear patterns of differences in changes of crops sales across the food security categories or the counties. Generally about half the households with agricultural sales reported no change over the last three years, while one-quarter reported increases, and one-quarter reported decreases. The main reported reason for increased sales is higher prices of commodities, while the main reason given for decreased sales is decreased production (Table 16).

Table 15. Change in agricultural sales over last 3 years, by food security category and county

	Lowest	Middle %	Highest	Bong	Nimba %	Total
Increased	0.0	27.0	35.0	23.9	26.4	25.3
Stayed the same	62.5	48.6	32.5	50.0	47.2	48.5
Decreased	37.5	24.3	32.5	26.1	26.4	26.3
<i>N</i>	8	37	40	46	53	99
<i>*mean value different from the lowest food security group, at the .10 significance level</i>				<i>*mean value different from Bong at the .10 significance level</i>		

Table 16. Reasons for changes in agricultural sales, by food security category and country

Reasons for increase in sales		% HH	Reasons for decrease in sales		% HH
	Higher crop prices	72.0		Decreased production	57.7
	Greater production	48.0		Low crop prices	34.6
	Better market access	44.0		Lack of post-harvest storage	11.5
	Improved storage	20.0		Diminished market access	7.7
	Improved access to market information	8.0		Lack market information	3.8
	<i>N</i>	25		<i>N</i>	25

Crops yields for the two primary staple crops, rice and cassava, were obtained to establish a baseline that should assist LAUNCH in setting realistic targets to boost crop productivity and bolster food security over a five-year time frame. The crop yields were computed on the basis of farmers reporting of i) the areas planted in rice and cassava, respectively (reported in acres, converted to hectares), and ii) the total quantities produced of each crop (converted from local units into kilograms).

Yields are extremely low, revealing how severe crop productivity, and thus the lack of food availability, is in the targeted zones of the project. As noted at the beginning of this report, food insecurity is a function of both quantity and quality of food items grown, confirmed by the figures in Table 17 below. Rice yields in the sample average just over 1.2 metric tons (MT) per hectare, well below optimal rice yields in most irrigated rice systems in West Africa. In Senegal, rice yields average 3.6 MT/ha according to one source.²¹ Other sources in Liberia have estimated rice production as low as 0.4 MT/ha, while pre-war estimates have been cited of 1.3 MT/ha for upland rice, and bottomland swamp rice at 1.6 MT/ha.²² Yields in the sample above 2 MT/ha constituted only 13 percent of the farmers interviewed.

Average yield for cassava appears to be even worse than rice, when compared to ‘normal’ yields cited in the literature. The mean yield in the sample was only 0.57 MT/ha, with only 8 percent of respondents obtaining over 1 MT/ha. This favors quite poorly with an average yield ranging from 6 - 8 MT/ha reported in other sources.²³

In Nimba County, a major campaign has been launched by the EU (Food Facility Project) to provide improved rice seed varieties through the Ministry of Agriculture (MoA) to significantly improve rice yields. A short season variety with a three-month growing cycle, termed RKF-19, can achieve yields of 4.5 MT/ha and be harvested twice a year in the swamp bottom lands. In the first pilot season, one source notes that farmers obtained 3.8-3.9 MT/ha in their first season which has been very encouraging. Two other improved rice varieties have been introduced, Narika L-19 and Swakoko 8, to boost rice yields as well. Traditional varieties of ‘country’ rice seed presently used by farmers require a 4-5 month growing season and produce only one annual harvest which is well below the agro-ecological and hydrological potential of the two counties. On average, the productivity of swamp rice is slightly higher than that of upland rice, averaging 1.5 MT/ha, while uplands generally average less than 1 MT/ha.

²¹ Republic of Liberia *The State of Food and Nutrition Security in Liberia. Comprehensive Food Security and Nutrition Survey 2010*. October 2010.

²² FAO/WFP. *Crop and Food Security Assessment for Liberia*. Monrovia, 27 February, 2006.

²³ Ibid.

The average field size for upland rice in Bong County according to one study is 1.4 ha, while lowland swamp rice fields in Nimba County average 1.6 ha. Cassava upland fields in Nimba County average 0.6 ha.²⁴

Table 17. Rice and cassava yields

	Rice			Cassava		
	(kg/ha)	# HH	%	(kg/ha)	# HH	%
Yield categories	0-500	22	31.9	0-250	12	32.4
	501-1,000	18	26.1	251-500	12	32.4
	1,000-2,000	20	29.0	501-750	7	18.9
	2,001-3,000	4	5.8	751-1,000	3	18.9
	>3,000	5	7.2	>1,000	3	8.1
	<i>N</i>	69		<i>N</i>	37	
Median (kg/ha)	793.0			343.6		
Mean (kg/ha)	1,208.0			571.5		

As noted above, tree crops provide important sources of household income. Men interviewed in Nimba County who work as daily laborers in rubber tapping are paid either a daily rate or by a production quota. In one FG, men said they could earn roughly LD\$ 1,000/ton, tapping 150-200 trees per month. This includes splitting the proceeds 50/50 with the tree owners. They also noted that many men are now shifting to rubber production in the region due to a strong rise in the price of rubber. A key informant in Zoe Gboa District in Nimba County estimated 2,000 rubber tappers in 2005-06 that has now risen precipitously to about 18,000 tappers in 2011.

World market prices of other key tree crops have declined, thus farmers are producing less cocoa, coffee and palm oil than previously. A region of Nimba County serves as the cocoa belt, but production has stagnated due to weak market prices. Coffee production, now earning only LD\$ 15 - LD\$ 25/kg, has declined, as well as palm oil which now earns LD\$ 75 – LD\$ 150/gallon.

For women, several pulses and vegetables provide good income. However distance to markets is a serious constraint in their ability to generate a reasonable level of income. Prices cited for the most remunerative crops for women in one FG discussion include cowpeas and brown peas (bakutoy), selling for LD\$ 25 per ounce, sesame (LD\$ 80 per ounce), hot pepper (40-45 kg sack selling for LD\$ 3,500), and bitter ball (LD\$ 2,000 for one bag of 60-75 kg).

4.1.6 Improved Farm Management Practices

LAUNCH aspires to boost crop productivity through a range of agronomic interventions that will organize smallholders in production clusters to be trained in improved farming methods, pest management techniques, post-harvest handling, and improved business and financial accounting practices. Therefore, an inventory of farming methods currently being practiced by smallholders reveals levels of adoption of improved farm practices at present.

Baseline figures reveal that in general, the proportion of farmers adopting improved methods and technologies is highest among the most food secure farmers and lowest among the most food insecure, although many of the differences are not statistically significant (Table 18). The exceptions to this general pattern are that fewer households in the highest food security category adopted line planting or composting compared with households in the lower food security categories. Across the two counties,

²⁴ MOA, FAO, IFAD, and World Bank. 2007. *Comprehensive Assessment of the Agriculture Sector in Liberia, Volume 1: Synthesis Report*. pp 22-23, 32-33.

there is no clear, statistically significant difference in the percent of farmers adopting specific agricultural practices.

It is worth noting that among the methods or technologies practiced, few farmers across all categories of food security in both counties are benefiting from improved methods of crop storage against rats, or using cassava grinders and rice mills. This is particularly salient, as FG participants frequently noted significant crop losses due to pests and rodents attacking crops in the fields (ground hogs) and in the kitchen storage areas (rats). Labor saving technologies such as grinders and mills would be of extreme benefit in reducing labor burdens, particularly for women, who carry a disproportionate load of the field labor throughout the year, while maintaining domestic household responsibilities for the care of children and all family members.

Table 18. Use of improved farm management practices, by food security category and county

	Lowest	Middle Mean	Highest	Bong	Nimba Mean	Total
% of smallholders using improved farm management practices						
Timely weeding	27.4	34.7	46.1*	28.6	41.4	35.5
Transplanting	27.1	32.3	40.0*	28.6	38.2	33.8
Line planting	40.0	26.0*	17.4*	35.4	20.4	27.3
Planting in ridges	9.5	16.5	44.4*	18.6	28.3	23.9
Compost	14.7	21.3	5.2*	11.8	17.3	14.8
Solar drying	6.3	10.2	13.9*	6.8	13.1	10.2
Planting in mounds(cassava)	4.2	1.6	7.0	3.1	5.2	4.3
Storage protected from rats	1.1	0.0	2.6	1.2	1.6	1.4
Cassava grinder	2.1	0.8	0.0	1.9	0.0	0.9
Rice mill	1.0	0.0	0.9	0.6	0.5	0.6
Mean number of practices used	1.3	1.4	1.8*	1.4	1.7*	1.5
% HH adopting at least 3 recommended sustainable agronomic technologies^a	19.0	25.2	28.6	24.4	25.7	25.1
<i>N</i>	<i>96</i>	<i>127</i>	<i>115</i>	<i>161</i>	<i>191</i>	<i>352</i>
	<i>*mean value different from the lowest food security group, at the .10 significance level</i>			<i>*mean value different from Bong at the .10 significance level</i>		

^aIPTT indicator – household practices at least three of the following: improved planting materials for rice or cassava, line planting, transplanting, timely weeding, compost, planting in mounds, or ridges

Women play a central role in agricultural production throughout Liberia, including both Bong and Nimba Counties. Two reports note that women in Liberia produce roughly 60 percent of all agricultural produce and engage in about 80 percent of all trading activities in the rural areas.^{25, 26} Despite their prominent role in rural agriculture, women are often overlooked in terms of direct participation in training activities to improve farming methods and boost farm productivity. This has been a widespread phenomenon throughout much of Africa, and is the case in the targeted areas of this study. Figures in Table 19 below confirm that women in the LAUNCH target zones have had much lower levels of participation in farmer training groups than men: only about 4 percent of women 18 and older reported receiving training in

²⁵ GOL and UN. June 2008. *Government and UN Joint Programme on Food Security and Nutrition. Project Description.* p 5.

²⁶ IMF and GOL. July 2008. *Liberia Poverty Reduction Strategy.* p 165.

agricultural practices, compared with almost 10 percent of men. Data from the table suggests that overall exposure of farmers to improved agronomic methods and technologies is relatively low, regardless of gender. It is also possible that heavy women’s work loads, both in farming and domestic household tasks, precludes their participation in targeted farmer training programs. It would appear, however, that recognizing the primary role that women play in agriculture, it is likely that many women have been largely neglected or overlooked in agronomic capacity building programs. This will require further investigation and confirmation by the LAUNCH project staff during the initial assessment and design phase of program activity. Access to agricultural training is significantly lower in Nimba county than in Bong, for both men and women.

Table 19. Percentage of men and women participating in farmer training groups, by food security category and county

	Lowest	Middle Mean	Highest	Bong	Nimba Mean	Total
% of women in farmer training groups	3.1	4.1	4.8	5.4	2.9*	4.1
% of men in farmer training groups	9.9	10.1	9.3	13.2	6.1*	9.6**
N	259	318	357	461	490	951
<i>*mean value different from the lowest food security group, at the .10 significance level</i>				<i>*mean value different from Bong at the .10 significance level</i>		
				<i>** mean value different from % women at .10 significance level</i>		

4.1.7 Improved Access to Financial Services

Another strategic area of program intervention under SO1 is to assist smallholders in improving their access to financial resources by building capacity in savings mobilization and the organization of micro-credit groups. Access to credit through formal micro-credit lending programs is almost non-existent in the areas visited under the baseline survey. Table 20 below assesses forms of credit access, confirming that formal micro-finance loan mechanisms are essentially unavailable to rural smallholders in the zones surveyed. Intra-community group lending occurs primarily through an informal rotating credit structure termed a susu, which is a widespread practice in both Bong and Nimba Counties. Individuals also rely upon their own social networks of kin or close friends to borrow money or in-kind loans (rice seed is most common) which are then paid back during the harvest season. Baseline figures below reveal clearly the importance of one’s food security status in being able to access loans through either the susu club or informal social networks. The percentage of the most food secure households accessing credit (64.9%) is nearly double that of the most food insecure households in the survey (37.9%). The most food secure households also have more capital savings and income to draw upon in times of need (33.9%) while the proportion of more vulnerable households with access to cash savings is significantly lower (9.3%).

Thus the ability to mobilize social capital in accessing loans in the form of cash or in-kind contributions correlates strongly to one’s food security status in the community. Overall, just over one-half of all households surveyed in both counties were able to access some form of credit. Lending through susu clubs appears to be more widespread in Nimba (32.8%) than Bong County (17.7%), while those in Bong appear to rely more heavily on kin-based social networks.

Table 20. Access to financial services, by food security category and county (multiple response)

	Lowest	Middle Mean	Highest	Bong	Nimba Mean	Total
% of households with access to savings / credit	37.9	55.1*	64.9*	52.8	53.3	53.0
Community savings/ credit group	19.0	24.7	33.9*	17.8	32.9*	26.1
Family or friends	14.9	25.1*	33.9*	35.0	16.5*	24.8
Cash savings	9.3	18.6*	33.9*	18.4	23.0	21.0
Other	1.2	3.6*	6.5*	3.0	4.8	4.0
Microfinance organization	0.4	0.4	0.8	0.6	0.7	0.7
Bank	0.0	0.0	0.0	0.0	0.0	0.0
N	245	247	248	337	417	754
<i>*mean value different from the lowest food security group, at the .10 significance level</i>				<i>*mean value different from Bong at the .10 significance level</i>		

The figures above are corroborated by FG discussions about the nature of formal and informal lending in the two counties. Few formal micro-credit group lending programs were reported in the villages visited. A government supported women’s cooperative, the Rural Women’s Structure (RWS), is organized by the Ministry of Gender and Development in some of the villages visited. Women organize collectively in farm groups of 25 members, cultivating swamp rice, peanuts, beans, and cassava. Members pay a monthly cooperative fee of LD\$ 25 which is then used to provide loans to members and non-members. The repayment rate for members is 25 percent, with most women reimbursing LD\$250 for every LD\$ 1,000 borrowed. Some groups in the larger towns have received a rice mill from the Ministry which is used to generate revenue. RWS members pay LD\$ 100 to mill their rice, while non-members pay LD\$ 150 – LD\$ 200. One group of RWS members in a FG session stated that they were selling cassava for LD\$ 250 per bag and earning good income from the activity.

While not well substantiated, some anecdotal information from FG discussions on credit suggest that some government and NGO-sponsored micro-credit programs have been beset by numerous problems. Some previous attempts at formal micro-credit lending have failed, such as in one larger community in Bong County where a micro-credit program sponsored by the UNDP failed due to embezzlement of funds by program officials. According to FG participants in one session, another micro-credit program established by BRAC and LEAP with a group of 30 women in one of the larger towns in Nimba County set weekly loan repayment rates of 25 percent, with many women accruing substantial debts through the program.

An agricultural official in Nimba County described an informal men’s credit group (called ‘gbuon’ in the Mano language) in which members pay LD\$ 100 – LD\$ 125 monthly. Members may also buy shares for LD\$ 500, and loan out funds for up to four months with a monthly interest rate of 25 percent. At the end of the year, the members then distribute profits according to their shareholdings in the group.

Both men and women participate in the susu clubs. Loan repayment rates appear to be high, at 25 percent for members on a three-month loan, while non-members may access loans with a repayment of 30 percent. A common loan practice in the susu club is to lend out rice seed to be paid back during harvest season, again at about 25 percent. One FG of men in Bong County noted that male members in their susu club contribute LD\$ 1,000 monthly, with each member receiving LD\$10,000 once a year during a monthly credit rotation. This form of lending helps men to access larger sums of cash for either productive investments in agriculture or other livelihood activities, or for other urgent uses, such as financing of social ceremonies, or paying off various debts such as for health care related expenses.

In general, FG respondents did not report indebtedness as being a serious, pervasive problem in their communities. It is probable that such information is perceived as highly sensitive to share in open group discussions, and is therefore most likely underreported.

4.2 Constraints to Smallholder Production

Many of the baseline measures explored above are better understood by identifying key factors that constrain smallholder production and invariably affect the food security status of the general population. Therefore, FG discussions were organized topically around core areas of constraint that hinder farm production, and access to inputs, markets, and financial resources. This section examines several areas of constraint and provides a more detailed contextual understanding of important factors that impede better farm production and the overall well being of rural smallholders. The constraint categories discussed here include cultural, economic, knowledge/informational, institutional/organizational, physical, and natural/environmental constraints.

4.2.1 Cultural Constraints

A number of cultural factors shape access to and use of natural resources, specifically land and water, which have a direct bearing on farm production and crop output. Among the factors explored here are gendered access to land, labor deployment capacity, and key social variables like age and marital status that can play a pivotal role in one's ability to engage in farming.

FG discussions on land tenure suggest that the issue is a contentious one, but not one that respondents were willing to discuss openly in a group setting. References were made occasionally to disputes over land, but few were willing to discuss land tenure arrangements with any degree of specificity. Women, in particular, acknowledged that they have few rights to land, but did not appear comfortable to probe the topic in depth, suggesting that they are resigned to a subordinate status in relation to men in terms of their formal rights over productive resources, most importantly land.

Government policy on land tenure in rural areas is somewhat ambiguous and customary property regimes are juxtaposed alongside state rights over land by eminent domain, creating some confusion in the minds of many rural smallholders. Smallholders access land through five different land tenure arrangements:

- Formal land titles or deed holdings, providing farming households with relatively secure land tenure; this appears to be the case with land holdings with highly valued tree crops such as rubber, cocoa, and coffee;
- Customary land holdings, providing farmers with relative land security via use rights conferred through village chiefs and elders, and clan-based rights over land;
- Land rental, leasing and sharecropping arrangements, providing farming households with little security and a high degree of uncertainty over longer term use of land;
- Land borrowing arrangements by outside, non-resident farmers who provide a portion of their harvest to the land owner in a type of sharecropping arrangement; and
- Land squatting, the least secure form of access to land.²⁷

In summary, three types of land exist: tribal customary lands, government owned lands, and privately held lands. In the larger towns visited, government-owned lands in the peri-urban peripheries were allocated to smallholders for use with no fees or taxes under various government or NGO-sponsored programs. The cultivating of tree crops is not permitted on government held lands.

²⁷ Sutter, Phil and Kristen Cashin. *USAID Office of Food for Peace Liberia Food Security Country Framework FY 2010 – FY 2014*. Washington, D.C.: Food and Nutrition Technical Assistance II Project (FANTA-2), Academy for Educational Development (AED), 2009.

One survey of landholding status from 2008 reveals that 66 percent of households in Bong County had access to land, of which nearly two-thirds was held under customary use rights, while 22 percent was deeded land, and 10 percent was squatted. Mean land holding size was 3.5 acres. In Nimba County, nearly three-quarters of smallholders had access to land, with more farmers holding legal title to land (48%) than those farming under customary rights arrangements (46%). Mean farm size was 2.5 acres, and 5 percent were farming on squatted land.²⁸

By law, women in Liberia hold equal rights to land through inheritance as men, and are allowed the same rights through customary law. However, there is a major disparity between de jure and de facto practice, as women rarely hold ownership rights to land through inheritance under customary practice. Use rights and ownership of land is generally accorded to the eldest son upon the death of the father under a patrilineal inheritance system.

Among women interviewed in FG discussions, land was farmed under usufruct arrangements that involved the sharing of field plots with their husbands. For younger women and elder widows, access to land for farming appears to be very difficult if not received as an inheritance right through the deceased spouse.

In one FG, some women stated that they had short term lease arrangements in which they paid a modest fee, or toll, in kind to land owners during the harvest period. A token payment of 25 to 50 kg of rice was a common practice. When borrowing rice seed, women reported paying back seven cans of seed rice for every five cans of seed borrowed.

One of the central features of farm life in Liberia, and a critical factor in one's ability to engage in farming is the deployment of a collective field labor group, termed a *kuu* in Kpelle. The *kuu* is a traditional system in which farmers work together to undertake labor intensive tasks, working in turn as a group on each other's farms. The person who is hosting the *kuu* in their field is to provide compensation for labor by preparing a large group meal, and in the case of men, sometimes providing palm wine. With more children now attending schools and labor scarcity being common due to the debilitating effects of the war, the ability to mobilize labor to carry out heavy field tasks has become a critical feature of both upland and bottomland farming.

Thus, women who have little or no family labor to draw upon, nor the means to prepare large meals for a *kuu* labor party, are particularly disadvantaged and among the most vulnerable in the community. In general, elderly widowed women are among the most vulnerable, as identified by other community members during FG discussions.

Age and one's stage in the family life cycle can also play a role in one's ability to mobilize group labor. Younger single women who have not yet married may experience some difficulty to engage in farming alone for this reason, if they are not farming with their parents.

A final factor that may influence a woman's ability to farm is her status within a polygamous marriage. Women observed in several FG sessions that the first or eldest wife in a polygamous marriage may sometimes, in negotiation with the spouse, assert more authority and control over the younger wives in terms of which field plots they are entitled to farm and what their responsibilities will be.

As noted, land disputes exist in the two counties, and may slowly be on the rise. Few examples of land conflict were cited in FG sessions. One agricultural official in Nimba County cited an example of land dispute in 2008, in which local residents burned the fields of a large landowner, claiming that the land

²⁸ GOL. *Liberia Food Security and Nutrition Survey*. 2008. p.3

was not obtained fairly and had been expropriated some decades ago. The local inhabitants desired to reclaim their patrimonial lands due to growing population pressure and a growing shortage of productive land. Apparently this has been the case with some Mandingos, who arrived as outsiders some time ago and were able to obtain land cheaply through village chiefs and elders. The indigenous local population of Mano and Gio descent is increasingly wishing to reclaim lost claims to the Mandingos, and some mild tensions have been expressed. Thus, slowly increasing population pressures and the atomization of family plot size through inheritance, as well as deeding of land to non-local investors, particularly for purposes of tree crop farming, may be a growing phenomenon, particularly in Nimba County. This matter should be carefully explored by the LAUNCH team in assessing the land tenure status of project beneficiaries.

4.2.2 Economic Constraints

As noted above in the discussion on access to financial services (Section 4.1.7), access to credit through formal channels is extremely limited. This, coupled with chronic shortages in discretionary income severely hamper the capacity of most smallholders surveyed in the study to make productive investments in agriculture, small livestock production, fishing, small business development, and other income generating livelihoods. Cash liquidity is scarce for the average household and most farm households live on the margin, consuming only one or two meals per day. Thus there is little room for error in terms of borrowing money to invest in agriculture or other income generating activities (IGA).

One successful vegetable gardener interviewed stated that most men are reluctant to take up gardening as a full time activity due to high start up costs, particularly for seed (circa LD\$ 2,000) that must be purchased in Monrovia for cabbage, eggplant and more high value vegetables. This statement is illustrative of how difficult it is for smallholders to gain access to inputs locally, such as high quality seed and fertilizer that is needed in order to engage in farming as a viable commercial activity.

Thus, the confluence of many factors discussed in this section of the report – cultural, economic, informational, institutional, physical, and environmental – have a cumulative effect of severely undermining the reproductive capacity of most rural farm households.

4.2.3 Knowledge and Informational Constraints

Section 4.1.6 above provides figures on the proportion of smallholders who have received training in improved farming methods and the use of improved technologies. As the data suggest, smallholders rely largely on their own local knowledge of farming practices that have been handed down from generation to generation. In FG discussions with both men and women, few groups reported receiving any formal agricultural training. This runs counter to the impression conveyed by several agricultural development officials interviewed, who provided more sanguine accounts of government and NGO-sponsored development interventions in the rural areas visited. It is highly likely that the information obtained is biased due to both a case of under-reporting in the communities visited in order to attract more donor support or to be selected for project support under LAUNCH; and over-reporting on the part of government officials in order to present a positive image of government support and overall development strategy to address rural poverty.

One of the largest development efforts launched in Bong and Nimba Counties is an FAO initiative funded by the Italian government, entitled Food Security through Commercialization of Agriculture (FSCA). With support of the EU Food Facility, the project has adopted a Farmer Field School (FFS) model to work with 3,800 farmers in Nimba, and 2,000 farmers in Bong in 2011. The program provides improved rice seed varieties, fertilizer (NPK, urea), and training on improved rice production. Farmers are required to reimburse the project after their first harvest with 25 kg of rice seed which has been provided to them as a loan. Producers then sell their rice to WFP under a program entitled Purchase for Progress (P4P) which is being used to replace bulgur wheat with rice food rations that are imported and distributed under a school lunch feeding program.

The focus of this program is to boost rice yields in the swamp bottomlands through the introduction of improved varieties of short cycle rice that will enable three crop harvests per year. The program aims to slow pressure on upland deforestation and forest biodiversity loss by shifting more rice cultivation to the swamp bottomlands. In Nimba County, the project is being implemented by a local NGO, SERE, which has organized farmers in groups of 25 (termed an FBO - Farmer-Based Organization). In one district visited, there are 35 FBOs. A group of five village Farmer Field Schools organize a cluster farm group drawing five members from each of the five communities that farm collectively once a week. The aim is for the FBO clusters to then bulk the rice for transport and marketing in the larger regional towns like Saclepea, Ganta, and Sanniquelle.

A brief list, though not exhaustive, is compiled below of some of the NGOS engaged in supporting agriculture and household livelihoods obtained during interviews with government agricultural officials and in FG discussions.

Organization	Project Activity
FAO	Seed multiplication
WFP	School lunch program
European Union	Rice farming
ACDI/VOCA	Farming as a business (rice, cocoa, vegetables); Sustainable Tree Crop Production (cocoa, palm)
Action Against Hunger	Hand pumps
Tearfund	Hand pumps
ARP (CBO)	Banana cultivation with students
Agricultural Relief Services	Agriculture
Catholic Relief Services	Adult literacy; seed multiplication (Cuttington University)
Concern Worldwide	Hand pumps, latrines; FFS rice, vegetables, livestock
Lutheran Development Service	Livestock production
Africare	Seed multiplication
Norwegian Refugee Council	Land conflict mediation
DRC, Africa	FFW for road rehab, swamp rice, cassava production
International Rescue Committee	Micro-credit
Care	FFS conservation agriculture
Solidarity International	Livestock, fish
ADRAF	Fish farming

The diffusion of information on improved farming methods through radio was briefly mentioned in a few FG sessions. Local community radio stations exist in the larger towns and broadcast some programming on agricultural activities. However, the ability to effectively gain technical knowledge on improved farming methods via radio with no direct hands on field training has very limited potential to assist farmers.

4.2.4 Institutional/Organizational Constraints

One of the most significant changes in farming since the war has been a shift from a top-down government organized approach to communal farming, to a more atomized focus on individual household

farms. This has forced farmers to rely more on their own family labor capacity, and thus a greater reliance on reciprocal group labor parties, or kuus.

Perhaps the most important institutional constraint in delivering training, products and services to rural producers is the severe shortage of government Ministry of Agriculture (MoA) extension agents who have few financial and logistical resources, and therefore rely on NGOs to provide agricultural training and extension services. In one district of Nimba County, the District Agricultural Officer (DAO) interviewed stated that the district had six extension agents, only three of whom are salaried by the MoA. The DAO himself was being paid under the FAO FSCA project, funded by the Italian government. Extension agents often have no means of transport, or a small motorbike with insufficient funds for maintenance and fuel needed to cover large distances in reaching widely dispersed farm communities.

Government policy on crop prices was not perceived to be a constraint by the farmers interviewed in FG sessions. Rice was the only cereal crop with a set market price determined by the government.

4.2.5 Physical Resource Constraints

A wide range of physical constraints were identified in FG sessions and key informant interviews that pose major obstacles for smallholders and significantly reduce capacity to achieve adequate crop harvests.

A recurrent problem in rice swamplands is the invasion of a plant parasite, caseworm (yabah), that has had a very negative effect on rice yields in some zones, such as in the rural areas near Bahn, in Nimba County. An agronomist with the agricultural extension service highlighted this problem in his region, noting that the proliferation of caseworm is due to the lack of proper weeding among farmers. Other pests also frequently invade rice fields, destroying harvests, the most common being birds and ground hogs. Use of locally constructed netting and fencing is generally not very effective in minimizing crop losses, according to farmers interviewed.

Critical farm inputs, including rudimentary farm implements, improved seed, and chemical fertilizers are in very short supply. Composting and manure appears to be used very sparingly due to the dearth of livestock in many communities. Supply chains for seed are virtually non-existent in the villages visited, and most seed, such as vegetables, must be borrowed from the largest producers in the village. One vegetable producer in Nimba County noted that NPK and urea is applied in vegetable production by the more commercial gardeners. However, good quality vegetable seed is quite expensive and generally available only in large quantities (e.g., LD\$ 5,500 for 50 kg sack of vegetable seed), and can only be obtained in the larger towns and cities of Ganta, Gbarnga, and Monrovia.

Farmers generally harvest and save their best seed for the next planting season. If more seed is required for planting, they must borrow seed from the larger farmers in the community.

Crop storage technology is very rudimentary, and entails the storage of rice in the thatch roofs above the kitchen cooking areas. Termite and rat infestation is a serious, chronic problem that further affects food loss and shortages. Zinc plates were observed on the posts in a few kitchen areas to prevent rats from entering the storage areas in the roof thatch. Under the FAO FSCA project, the MoA and UNDP plan to build warehouses to store rice in the larger market towns for farmers cultivating swamp rice. While this may prove advantageous to those farmers participating in the project in terms of bulking and storing rice for market exchange, no project interventions were observed at the village level to improve post-harvest storage technology, particularly for rice that is consumed within the household.

Perhaps the most significant physical constraint faced by most smallholders is geographical isolation and long distances to local markets of a reasonable size to market their crops. Dirt roads are in extremely poor condition, with very bad or no bridges, and are generally impassible for several months during the rainy

season, isolating some communities from markets for at least 2-3 months per year. Many female respondents in FGDs said they would walk at least 2-3 hours to the closest area market, and in one village, carrying their crops on their heads for up to 6 hours to reach the nearest market. Transport by bicycle or other means is generally too expensive for most women to get their produce to market. Upon arrival, women commonly pay a small market association fee of LD\$ 15 – \$ 20 to use a small area of ground space to sell their goods.

4.2.6 Natural/Environmental Constraints

The natural physical environment can pose challenges to food security as smallholders rely upon seasonal patterns of rainfall and the elements of nature to farm and feed their families. A number of environmental processes were discussed as constraints to farm production during FG sessions.

Farmers often noted problems of declining soil fertility due to the shortening of fallow periods. One farmer noted a decline in his fallow interval from 10 to 3 years in his upland swidden system over the past decade, while another cited a drop from 10 to 5 years. Another individual noted a decline in the swamp rice fallow from 5 to 2-3 years. As noted, cultivators have no financial means to apply chemical fertilizers to their fields unless provided freely by a project donor, thus soils are deteriorating and fallow periods are declining from growing demographic pressures, as well as growing land speculation in some areas.

Natural disasters such as drought or flooding appear to be rare occurrences in the villages visited. Few examples were cited. Heavy rains late in the dry season during the past year were reported by one community, posing serious problems for clearing brush with sufficient time to plant before the onset of the full rainy season. Storms with high winds were the most common occurrence noted, occasionally destroying thatch and zinc roofing. In one instance, a community was left with many members homeless after a severe wind storm had recently destroyed the roofs of many huts. While a community inspector visited to assess the impact, villages were forced to mobilize their own resources to rebuild damaged roofs due to the lack of financial resources or building materials available from the local government.

As noted earlier, FG participants often noted changes in climate patterns, particularly increasing irregularity in the onset and distribution of rainfall, posing problems for field clearing in time for the planting season. In one village discussion, village leaders noted that the arrival of early rains in the dry season prevented the clearing of bush and felling of trees to cultivate fields, resulting in a severe food shortage and reliance on hunger foods (cassava and palm cabbage) in 2008. In the rice fields, women spoke of ‘burning’ of their rice seed due to more frequent dry periods and uneven distribution of rainfall in the wet season.

Although communities are exposed to episodic storms, intense rains and high winds, and have recovered slowly from the ravages of a recent civil war, there has been very little community mobilization and capacity building around disaster risk planning. Initiatives to institute disaster risk preparedness and prevention capacity has occurred only at higher district or county levels, with little information filtering down to the most vulnerable in rural village areas. Only one reference was made to any level of disaster risk planning, by a local NGO (Equip Liberia), that was organized only at the county administrative level.

5.0 Strategic Objective 2: Reduced Chronic Malnutrition of Vulnerable Women and Children Under Five

A key objective of the LAUNCH program is to reduce malnutrition of women and children by improving nutrition and feeding practices of pregnant and lactating women (PLW) and their infants, and improving prevention and treatment of maternal and child illnesses. Activities include the provision of food rations to children under 2 or pregnant and lactating women, support to clinics and the training of community

health volunteers (CHV), traditional midwives, and lead health promoters (LHP), the establishment of community-based health care groups and facilitation of improved community-clinic linkages, and improved water and sanitation practices through the creation of community water subcommittees.

Anthropometric measurements of children are considered to be indicators of nutritional status of children, and by extension, the nutritional status of the households they reside in. Anthropometric measurements are considered to be good impact-level indicators of food security, because these indicators are affected by awareness of appropriate feeding practices, access to health services and appropriate sanitation, as well as access to food. Stunting (low height for age) is a measure of long-term nutritional status – children with deprivation of adequate diet over a long period of time will exhibit low growth in stature. Wasting, (low weight for height) is a measure of short-run or acute undernutrition, as this indicator can change very quickly based on the child’s diet. Underweight (low weight for age) is a combined measure, which can be affected by both short-term and long-term undernutrition.

There are no distinct, statistically significant patterns of anthropometric measurements of children under 5 (U5) across the food security categories, or by county, as shown in Table 21. Overall, 42% of all measured U5 children were stunted (HAZ < -2SD). This figure is quite close to the value of 39.4% in the 2007 LDHS. Overall rates of wasting (18.6%) and underweight (30.8%) are significantly higher than the values recorded in the DHS (wasting of 7.5%, underweight of 19.2%).²⁹ These differences indicate that short-term food security conditions are worse at the time of the baseline in 2007. This may be due to the season of when information was collected. The LAUNCH baseline survey was conducted close to the beginning of the most severe lean season, when short-term nutritional status of children can be expected to be quite low. Stunting is significantly lower in girls than boys, but the other anthropometric indicators or essentially the same for boys and girls. These patterns of differences by gender are similar to those found in the 2007 LDHS.

Table 21. Anthropometric indicators by food security category, county and sex of under-5 (U5) child^a

	Food security category			County		Sex of child		Total Sample
	Lowest	Middle	Highest	Bong	Nimba	Male	Female	
	% U5 children			% U5 children		% U5 children		
Stunted ^b	43.1	39.1	47.2	43.9	40.5	46.1	37.3*	42.0
N	225	276	284	383	496	466	413	879
Underweight ^c	32.7	31.3	30.4	29.0	32.1	32.7	28.7	30.8
N	257	294	319	414	560	510	464	974
Wasted ^d	14.9	20.0	19.7	16.9	19.9	19.6	17.5	18.6
N	242	290	304	397	542	494	445	939
	<i>*mean value different from the lowest food security group at the .10 significance level</i>			<i>*mean value different from Bong at the .10 significance level</i>		<i>*mean value different from males at the .10 significance level</i>		

^aBased on WHO 2006 Reference Population

^bHAZ < -2 sd; ^cWAZ < -2 sd; ^dWHZ < -2 sd

The following sections will first present quantitative findings on a number of baseline indicators pertaining to SO2 gathered for the study. These findings will then be interpreted in terms of the key

²⁹ Liberia Demographic and Health Survey 2007, Liberia Institute of Statistics and Geo-Information Services (LISGIS), June 2008.

constraint categories discussed in the previous SO section above that have some bearing on women's ability to nurture and feed their children.

5.1 Infant and young child feeding practices

Nutritional feeding practices of mothers and their infants under the age of two was explored in depth in women's FG sessions to identify cultural practices and beliefs about breastfeeding and childcare that influence women's behavior and decision making with regards to the health of their children. Data collected from the quantitative survey and in FG discussions focused on breastfeeding practices, complementary feeding, and a host of factors that shape or constrain women's capacity to adequately care for their children.

Data on infants who are exclusively breastfed up to five months, those who are breastfed from 6-23 months with minimum dietary diversity and meal frequency, and those in the same category who are non-breastfed is presented in below. Findings are stratified by food security status and also by county. Figures on exclusive breastfeeding show a positive correlation between household food security status and exclusive breastfeeding. Slightly more than 80 percent of mothers in the most food secure households breastfed exclusively in the past 24 hours, compared with only about 47 percent in the most food insecure category. This could be because the health status of the more vulnerable mothers is compromised, or that the quantity of breast milk is insufficient, forcing them to begin complementary feeding earlier. It is also possible that due to the economic hardship of the most food insecure households, women are required to resume farming and physical field tasks that preclude them from practicing proper breastfeeding on a continual basis. When comparing exclusive breastfeeding practice between counties, there are a significantly higher proportion of women engaged in exclusive breastfeeding in Nimba County (78%). The reason for this is not evident from FG discussions in each county, and therefore this disparity should be further examined in the initial assessment phase of project implementation.

Table 23 shows the percent of children breastfed by age in months from 0 to 23 months. The percentages are generally similar, although somewhat higher than the figures in the LDHS. Note that the number of children in each age category is quite small.

The percentage of children from 6-23 months with minimum dietary diversity and meal frequency³⁰ is relatively low, ranging roughly from 10-15 percent, with no significant differences across food security category or between the two counties.

Table 22. Infant and young child feeding practices, by food security category and county). The average number of different food categories eaten by 6-23 month old children out of eight different categories is 1.8.

³⁰ Percent of children that ate at least 3 of the food categories if nursed, or at least 3 of the food categories plus milk at least twice if not nursed.

Table 22. Infant and young child feeding practices, by food security category and county

	Lowest	Middle Mean	Highest	Bong	Nimba Mean	Total
% of infants 0-5 months exclusively breastfed during previous day	46.9	65.6	80.9*	52.1	78.1*	67.0
N	32	32	47	48	64	112
% children 0-23 months initiated nursing within 1 hour of birth	89.3	88.4	75.7*	78.8	88.4*	84.1
N	112	121	133	165	207	372
# food categories consumed by children 6-23 months ^a	1.8	1.8	1.7	1.7	1.9	1.8
% of children 6-23 months with minimum dietary diversity & meal frequency ^b	14.8	12.2	9.9	12.1	13.3	12.8
N	88	90	91	124	150	274
<i>*mean value different from the lowest food security group, at the .10 significance level</i>				<i>*mean value different from Bong at the .10 significance level</i>		

^aAverage number of foods from the following categories (grains, tubers, legumes, dairy, flesh, eggs, foods rich in vitamin A, other fruits and vegetables) consumed by the child in previous 24 hours.

^bPercent of children that ate at least 3 of the food categories if nursed, or at least 3 of the food categories plus milk at least twice if not nursed.

Table 23 Percent of children 6-24 currently breastfed by age^a

Age in Months	N	Baseline	LDHS
		% Currently breastfeeding	% Currently breastfeeding
0-1	43	97.7	95.3
2-3	43	90.7	98.4
4-5	26	96.2	99.4
6-8	61	100.0	96.3
9-11	51	88.2	96.5
12-17	98	94.9	82.2
18-23	64	65.6	53.8

^aReported breastfeeding during day prior to interview

5.2 Antenatal and postnatal care

The LAUNCH program will work with local health clinics to improve women's access to basic health care services through both antenatal and postnatal visits to assure that the health status of women and children is monitored and improving over time. Therefore, it is essential to have an understanding of current levels of utilization of health care services and how they can be improved.

Following recommended WHO guidelines, women were asked if they had visited their nearest clinic for antenatal monitoring checkups on at least four occasions. Sixty six percent of women attend at least 4 times ante-natal (compared with 66% for total population and 60% in rural areas found in LDHS), as shown in Table 24. Again, there is a significant difference among the highest and lowest food security categories in antenatal visits. Among the most food secure women, nearly 76 percent were able to make antenatal visits, while only 58 percent of the least food secure women had 4 or more visits. One possible explanation for this difference may be that women in food insecure households are less able to find time

to go to the health clinics. There is no difference across counties, at approximately 66 percent in both counties.

The study examined the proportion of children age 12-23 months who had been fully vaccinated. Most vaccination outreach is carried out directly in villages, most of which do not have clinics, by Community Health Volunteers (CHVs). Vaccination rates are relatively low, with 16% of all sampled children fully vaccinated as verified from their cards, and 38% fully vaccinated based on mothers' information (compared to 39% based on mothers' information in 2007 LDHS). There is a statistically significant difference in the proportion of children vaccinated between the counties, with Bong having only 11 percent of children fully vaccinated, while in Nimba the figure is roughly 21 percent. The reason for this significant difference is again, not readily apparent, but suggests that vaccination campaigns have been more limited in Bong County. This will require further exploration by the LAUNCH team in the near future as program activities are being revised for implementation.

Table 24. Antenatal care and childhood vaccination, by food security category and county

	Lowest	Middle Mean	Highest	Bong	Nimba Mean	Total
% of mothers with children <24 months who had four or more antenatal visits when pregnant	58.3	62.0	75.7*	65.8	65.9	65.8
N	127	129	144	187	220	407
% of children age 12-23 months fully vaccinated (verified from card) ^a	15.7	10.9	22.6	10.8	20.5*	16.0
% of children age 12-23 months fully vaccinated (reported by mother) ^a	37.2	40.0	37.7	29.7	45.5*	38.3
N	51	55	53	74	88	162
	<i>*mean value different from the lowest food security group, at the .10 significance level</i>			<i>*mean value different from Bong at the .10 significance level</i>		

^a Vaccinations for BCG, polio (3 doses); DPT (3 doses); and measles were verified by card.

5.3 Potable water supply and sanitation

The remote distance and geographical isolation of many villages in both counties poses serious challenges in accessing clean drinking water. The costs of borehole drilling and well construction are high, due in part to the poor condition of roads for transport of drilling equipment and long driving distances into the rural hinterlands. While borehole wells with hand pumps were observed in many of the villages visited, it was common for some, if not all, of the wells to be in disrepair or dry due to shallow well depths, thus lacking sufficient water supply in the dry season.

Quantitative figures on water supply source suggest that seasonal differences in water use source are not notably different (Table 25). Nor are they significantly different between the counties. However, the water source does vary by food security category for each season, with the least food secure relying more upon hand dug covered wells (48.4%) in the dry season, while the most food secure have greater access to clean water through a borehole (34.7%) or cistern/rainwater supply (15.7%). These findings are also similar in the rainy season.

Table 25. Main source of drinking water (dry and rainy season), by food security category and county

	Lowest	Middle Mean	Highest	Bong	Nimba Mean	Total
Dry season						
<i>Hand-dug well COVERED</i>	49.0	38.5*	21.4*	38.0	35.0	36.3
<i>Borehole</i>	26.9	34.4*	34.7*	30.6	33.3	32.1
<i>River/pond</i>	13.9	18.2	19.8*	16.3	17.7	17.1
<i>Hand-dug well UNCOVERED</i>	9.8	7.7	8.1	9.8	7.2	8.4
<i>Cistern/rainwater</i>	0.4	0.8	15.7*	4.7	6.7	5.8
<i>Other</i>	0.0	0.4	0.4	0.6	0.0	0.3
<i>N</i>	245	247	248	337	417	754
Rainy season						
<i>Hand-dug well COVERED</i>	48.4	37.8*	21.0*	38.2	34.3	36.0
<i>Borehole</i>	28.6	37.8*	36.8*	32.5	36.0	34.4
<i>River/pond</i>	10.6	15.9*	14.2	12.2	14.4	13.4
<i>Cistern/rainwater</i>	2.0	2.4	19.8*	7.5	8.9	8.2
<i>Hand-dug well UNCOVERED</i>	9.8	6.1	8.1	9.6	6.5	7.8
<i>N</i>	245	246	247	335	417	752
<i>*mean value different from the lowest food security group, at the .10 significance level</i>				<i>*mean value different from Bong at the .10 significance level</i>		

Disease vectors are often transmitted due to poor sanitation facilities and exposure of human and animal waste to the natural environment, which can gradually run off into the ground water supply. Therefore, the use of sanitation facilities in the form of pit latrines was assessed during the baseline survey. Figures in Table 26 confirm that latrines are not commonly used, and that roughly 70 percent of the population, regardless of food security status, uses the open bush as their toilet. Differences in toilet source do not vary significantly in any way between the two counties.

Table 26. Source of latrine, by food security category and county

	Lowest	Middle Mean	Highest	Bong	Nimba Mean	Total
Type of latrine used by HH						
<i>No access to latrine</i>	70.1	68.4	71.0	67.7	61.4	69.7
<i>Covered pit</i>	24.2	27.1	20.6	25.4	23.0	24.0
<i>Uncovered pit</i>	4.0	4.5	7.3	5.9	4.5	5.2
<i>Pour-flush</i>	0.4	0.4	0.8	0.3	0.7	0.5
<i>Septic</i>	0.4	0.0	0.4	0.6	0.2	0.4
<i>VIP</i>	0.4	0.4	0.0	0.3	0.2	0.3
<i>N</i>	244	247	248	337	416	753
<i>*mean value different from the lowest food security group, at the .10 significance level</i>				<i>*mean value different from Bong at the .10 significance level</i>		

5.4 Hygiene

Hygiene practices were assessed by recording outbreaks of diarrhea, water storage practice, and hand washing behavior. The percentage of respondents reporting outbreaks of diarrhea during the past two weeks was relatively high, and surprisingly highest in the middle and high category households by food security ranking. Nearly half of the middle category households (44%) reported a diarrhea outbreak

(Table 27). This corresponds with data above on water source, as the middle and high tier households use rivers and ponds for drinking water more frequently than the bottom tier households.

In terms of water storage practice, a greater percentage of middle and high category households cover their drinking water than do the low category households. There are no significant differences in outbreaks of diarrhea or water storage practice between the two counties.

Table 27. Prevalence of diarrhea and water hygiene, by food security category and county

	Lowest	Middle Mean	Highest	Bong	Nimba Mean	Total
% of HH reporting diarrhea of HH member in last 2 weeks	33.5	44.1*	35.9	39.8	36.2	37.8
% of HH who store water in a covered container	48.6	59.1*	70.6*	60.2	59.1	59.6
N	245	247	248	337	417	754
<i>*mean value different from the lowest food security group, at the .10 significance level</i>				<i>*mean value different from Bong at the .10 significance level</i>		

Hand washing behavior has some bearing on the health of infants and the spread of bacteria and infectious disease, leading to diarrhea from contaminated food or water. Respondents were asked about five critical times during which good hand washing hygiene should be practiced. This includes before eating, after defecation, before food preparation, and before breastfeeding and feeding of solid foods to children.

Findings shown in Table 28 reveal that hand washing is most frequently practiced before eating and after defecation, and less so on other occasions noted above. Hand washing is more frequently practiced among middle and high food security households than low food security families before eating and defecation, while the converse is the case with regards hand washing before food preparation and feeding of children. Women are more inclined to wash their hands before eating, after defecation, and before feeding their children in Nimba County than in Bong County, while women in Bong County wash their hands more often before preparing meals.

Table 28. Reported hand washing behaviors of caregivers of young children, by food security category and county (multiple response)

% of caregivers who wash their hands:	Lowest	Middle Mean	Highest	Bong	Nimba Mean	Total
Before eating	75.9	81.8*	85.5*	75.7	84.9*	80.8
After defecation	59.6	77.3*	86.3*	65.9	81.5*	74.5
Before food preparation	64.5	49.8*	47.2*	60.5	47.5*	53.5
Before feeding children	41.2	32.4*	21.4*	26.4	35.7*	31.6
After cleaning baby's bottom	27.4	27.1	22.2	25.8	24.9	25.3
Other	9.0	7.7	32.7*	16.0	16.8	16.5
N	245	247	248	337	417	754
<i>*mean value different from the lowest food security group, at the .10 significance level</i>				<i>*mean value different from Bong at the .10 significance level</i>		

Table 29 reports the incidence of diarrhea within the household in the last two weeks, broken down by the number of different hand washing behaviors – the reported times when hands are washed as shown in the previous table. The results do not reveal any strong relationship between the reported hand washing behaviors of caregivers of children, and the incidence of diarrhea within the household.

Table 29 Incidence of diarrhea by reported hand washing behaviors of caregivers

Number of reported hand washing behaviors	N	% HH reporting cases of diarrhea in last 2 weeks
0-1	99	44.4
2	221	29.0*
3	223	44.0
4+	211	37.4
Total Sample	754	37.8

* statistically different from 0-1 hand washing behaviors at 0.10 significance level.

5.5 Perceptions of Vulnerability

A semi-structured survey was used to discuss perceptions of vulnerability in several of the communities visited. The topic was raised in some FG sessions as well. A summary on perceptions of vulnerability, along with other key features of the villages surveyed is presented in table format in Annex 12.

Respondents consistently identified children, widows, the elderly, and the physically handicapped as the most vulnerable to illness and therefore, at greatest risk in terms of their ability to overcome the seasonal window of food scarcity and hunger during the height of the rains. During the hunger season, from July to September, village leaders (both men and women) consistently reported that children and women are fed first, and that two hunger foods, cassava and palm cabbage, are the main staple consumed during this period of food scarcity. They also noted that widows, who still have children to care for, are considered highly vulnerable since they have few kin to draw upon as a labor pool to assist them with farming.

5.6 Constraints to health and nutrition among women and children

The same constellation of factors that constrain farm production discussed under SO1 are explored here in relation to health and child care practices among women. Women have specific cultural beliefs and practices, such as food taboos and attitudes about birth control in relation to breastfeeding that have an important influence on the health of their infants. Lack of information on proper health and nutrition practices, poor access to health care due to economic and physical barriers, and the institutional capacity of local health care delivery systems all pose serious limitations for women in their ability to adequately care for their children.

Overall, the high levels of malnutrition recorded among children in Bong and Nimba Counties may be attributed to factors of both dietary quality and quantity. Diets in general, have little balance or diversity of nutrients and food sources, and are heavy in carbohydrates. Most families report eating only one or two meals per day. The average household diet diversity score (HDDS) computed in the quantitative survey is only 4.7, quite low in comparison with other countries.

5.6.1 Cultural Constraints

Child care is shared within households, as labor burdens are high and young mothers must often resume field tasks of planting and tending family fields within a short period after child birth. Thus, infants are often not properly breastfed due to the high demands of labor and heavy work burdens of women both in farming and in their domestic care responsibilities.

Women in FG sessions noted the influential role of the paternal grandmother in the household, who will often assume child care responsibilities for young mothers when they resume farming of the fields, or engage in fishing activities. Some women are forced to leave their infants behind in the compound with the grandmother when the infant is only three or four months of age. At a very young age then, infants may begin to receive water mixed with cassava, rice, or plantain 'dust' (flour). Water sources may be contaminated, posing serious risks to the health and nutritional status of the infant.

Grandmothers may also advise young mothers on what foods to avoid during pregnancy and how to feed and care for their infants. Some food taboos, discussed in FG sessions, are practiced by women, although the extent of such taboos may not significantly influence the health of new born infants. A number of food taboos and their perceived effect on a child's health were identified, some of the most common include:

- Snails (child will have poor speech)
- Porcupine (causes cleft palate)
- Chicken eggs
- Bush cow
- Turtle
- Pineapple (causes miscarriage)
- Sugar cane (miscarriage)
- Lime (dries the blood)
- Bamboo shoots (child will look like bamboo)
- Monkey meat (child will look like a monkey)

During lactation, taboos mentioned in FG sessions include: catfish (causes diarrhea) and frog (vomiting). Also, one respondent noted that bathing at night was forbidden as evil spirits will threaten pregnancy and the health of mothers.

Breast feeding practices were discussed in some detail in women's FG sessions since such practice is critical to an infant's survival. There was uniformity of response among women, who all stated that they feed their newborns colostrum, or 'first milk'. Most women reported breastfeeding for approximately 12-14 months before weaning their children, which generally occurs when they begin to walk.

Complementary foods are generally introduced around six months of age, although, as noted above, some women leave their infants behind with their grandmothers even before six months. According to one health official, food scarcity contributes to lack of breast milk and an inability to feed on demand for some women. Women in one FG discussion indicated that if a woman is unable to provide breast milk, there is no practice of surrogate breastfeeding due to the risk of transfer of illness from surrogates to infants.

Women who are breastfeeding their infants rarely engage in any modern forms of contraception or family planning. Rather, they rely heavily on traditional methods and beliefs, such as the use of herbs and gris-gris strings worn around their waist. Women generally resume sexual activity with their spouses when children begin to walk at 9-12 months. Many women become pregnant soon after resuming sexual activity, and begin weaning their infants at 12-14 months. One women's FG stated that they tolerate extra-marital sexual relations of their spouses while the women abstain from sex during breastfeeding. Another FG noted that the resumption of sexual activity with their spouses will negatively affect the health of the infant.

Condom use is rarely practiced by men in the regions surveyed. Thus, sexually transmitted infections (STI) are prevalent and seen often in the local clinics. It is possible that polygamous practice only spurs transmission of STIs. One health official stated that the use of condoms or any form of contraception is

strongly rejected by Muslims in the region, who believe that such practice is unnatural and incongruous with the wishes of God.

No data was available on local rates of HIV/AIDS but it is presently believed to be very low. The national rate is 1.5 percent, relatively low in comparison to many other regions of Africa.^{31, 32} Only one documented case was reported in one of the clinics visited in Nimba County. However, health officials note that women are extremely reluctant to test for HIV/AIDS. Therefore, it is highly likely that the incidence of HIV/AIDS is widely underreported in the country. In the local vernacular of Kpelle, HIV/AIDS is referred to as ‘until I kill you’ or ‘*fe an bai*’.

As noted earlier, the capacity to mobilize labor groups or *kuus* plays an important role in the overall food security status of a household. It is the combination of poor crop harvests and a lack of diversity in children’s diets that leads to high rates of malnutrition in the two counties. It was rare that any respondents noted eating three meals per day. The only exception to this is during the harvest period when key members of the household reside in the field and are unable to prepare meals in the morning, afternoon, and evening.

In discussing dietary composition, FG respondents noted the lack of fruits and vegetables, containing essential vitamins and minerals, in their diets. Protein sources are also lacking, and aside from dried fish, fresh fish is seasonally consumed. Sesame (referred to as ‘benne’ seed locally), an excellent protein source, is generally imported from Guinea, and is consumed along with leguminous sources of protein such as peanuts and beans. Meat is a luxury food item, and not a regular daily staple of the diet. One FG of women noted that when meat is available, men are fed first, and women may be lucky if any meat remains for them once the man is fed.

The health and nutritional status of mothers and their infants has a temporal dimension as noted in Section 4.1.3 above on seasonal changes in food supply. General food insecurity is compounded by seasonal exposure to various diseases, most of which have a temporal dimension. Malaria, one of the most common and fatal illnesses among infants, spikes near the end of the wet period when stagnant water bodies become breeding grounds for mosquitoes in August and September. Respiratory infections such as pneumonia and whooping cough occur during the dry season. The incidence of measles and diarrhea also rises during the dry season, the latter due to shortages in potable water supply as boreholes run dry, forcing individuals to drink water from contaminated sources such as streams and hand dug wells.

Other water related-illnesses in the two counties include onchocerciasis, or river blindness, and schistosomiasis, which is a common health risk from farming in the swamp rice bottomlands. Meningitis is rare, according to one health official, and polio campaigns have been widespread and effective, with only one case being reported in one district visited in Nimba County. Only four cases of tuberculosis have been reported in the same district.

A surprisingly common phenomenon discussed in several FG sessions has been the number of seizures reported in the villages visited, affecting children and adults alike. The cause of this unusual occurrence is unclear. This unique finding should be further examined in the communities that will be selected for participation in the LAUNCH program.

³¹ LISGIS, MOHSW, National AIDS Control Program, and Macro International Inc. 2008.

³² *Liberia Demographic and Health Survey 2007*. Monrovia, Liberia: LISGIS and Macro International Inc.

A final observation that arose in several FG discussions on the seasonal dimensions of health, was exposure of farmers to leeches during the cultivation of swamp rice, which they said frequently led to skin lesions and infections, and general sense of fatigue.

5.6.2 Economic Constraints

Economic constraints discussed in FG sessions pertaining to ability to access health services relate to the general issue of widespread income poverty and very low discretionary income available to pay for health services, medical treatment, medications, etc. As in much of rural Africa, highly impoverished communities must generally rely upon traditional forms of healing, or the support of CHVs, whose treatment capacities are very limited. Individuals who do access rural clinics, find that medical prescriptions that require ongoing use are unaffordable, and thus not taken beyond initially prescribed medicines that are distributed freely.

5.6.3 Knowledge and Informational Constraints

There appears to be considerable disparity between medical information received at the clinic level, and the actual adoption of good health care practices over a sustained period of time at the community level, according to one clinic official. Without constant reinforcement and monitoring, the official believes that villagers often revert to previous health behaviors and practices. The example given was that of hand washing, which the official believes is nominally practiced despite participation of PLW in antenatal sessions on health, nutrition, hygiene, and sanitation practices to foster good health of mothers and their infants. Therefore, considerable work remains to be done by LAUNCH in strengthening the capacity of CHVs, TTMs to train and monitor women in actual behavior change over a sustained time frame in adopting improved health, nutrition, hygiene, and sanitation practices.

5.6.4 Institutional and Organizational Constraints

The institutional delivery of health care services relies upon a vertical committee structure from the county to district and community levels. The Liberian government has organized a Community Health Development Committee (CHDC) at the district level, with Community Health Committees (CHC) at the village level. Few CHCs appear to be operational in the communities visited, and most local health clinic officials interviewed made reference only to the CHVs and traditional birth attendants (TBA) as being represented at the village level.

CHVs are generally trained through NGO-sponsored projects and it is not clear whether a government endorsed curriculum with training standards has been designed for adoption and use by the NGOs and CHVs. The CHVs serve as the frontline in the identification of illness and primary treatment of basic maladies in rural communities. They carry out vaccine outreach, and are paid a modest fee (US\$ 10/month) during the short vaccine campaigns. A major concern expressed by several health care officials has been the low morale and motivation of many of the CHVs who work largely on a volunteer basis. They walk long distances to the rural clinics and other villages to run vaccination outreach, attend clinic-sponsored training sessions, etc, with almost no financial support. The volunteers have normal responsibilities to farm their own fields in order to feed their families. Thus, the challenge of providing reasonable incentives that do not foster and perpetuate a dependency culture is a sensitive matter that will need to be addressed by the project.

Clinics were favorably viewed by women in FG sessions. They are providing mothers with birthing kits consisting of blankets, diapers, powder and soap, and mosquito nets at antenatal clinics that are greatly appreciated and serve as a strong incentive for mothers to attend the clinics. Clinics have also introduced a village water chlorination program (Water Guard) in Nimba County that appears to have successfully introduced chlorine use and protection of water in many villages. The only negative observation concerning clinics was some anecdotal evidence of women paying small fees to health clinic officials in

order to receive medications that are to be distributed freely. Whether this is a widespread problem or not should be explored further by the LAUNCH team.

Some NGOs are providing support for health and nutrition services, as summarized in the following table:

Organization	Project Activity
Africare	Health care training
Mentor	Health care training
International Committee for the Red Cross	Health and nutrition
Equip Liberia	Health training

5.6.5 Physical Resource Constraints

Several physical resource constraints in relation to access to health care services were identified in FG sessions. The most apparent physical barrier, noted above, has been the relative geographical isolation and long distance to markets and health care centers which is considerable for many of the communities visited. Women often stated that the distance to the nearest health clinic was at least a three or four hour walk. When individuals are gravely ill and must be transported to the closest clinic, they are carried in a hammock on foot by several members of the community.

Medications, as noted, are generally disbursed for free in the health clinics, but often are in short supply, requiring a prescription and payment for additional medicines. Thus patients often do not follow up in taking adequate dosages of medication. It is common to buy medications in the market at market tables with no assurance of the authenticity or quality of medication, or an expiration date.

Water supply is another major physical resource constraint commonly cited in FG discussions. In most villages visited, only one or two hand pumps would be operable, while others were either abandoned due to mechanical maintenance and repair problems, or inaccessible in the dry season due to lack of water from shallow well depths. This period of shortage in water supply corresponds with an increase in the incidence of several illnesses identified, such as respiratory ailments, measles, and diarrhea.

There is also a notable absence of sanitation facilities in most villages visited. Pit latrines are few and often reserved primarily for visitors, according to one source, due to the sanitary conditions of the latrines that are poorly maintained, left uncovered and exposed to flies and insects. The poor maintenance of the toilets and unsanitary odors associated with them discourages their use.

Due to the lack of properly maintained toilet facilities, one health official believes there is a rising incidence of contaminated water from streams and wells due to extensive run off of human and animal excrement into the ground water supply. The same official also observed that hand washing is generally practiced only prior to eating, but not rigorously practiced during the day when individuals defecate in the bush or after using latrines. Water, when stored in buckets and tubs, is often left uncovered and unprotected from exposure to bacteria and the natural elements.

5.6.6 Natural/Environmental Constraints

The seasonal dimensions of illness and exposure to hunger that are associated with seasonal patterns of rain and dryness have been examined above. As noted, a long, abundant rainy season allows for the proliferation of certain illnesses such as malaria, and easily floods roads, damaging bridges, and makes access to markets and health care facilities extremely difficult for several months of the year.

6.0 Strategic Objective 3: Improved Educational Opportunities for Children and Youth

The third pillar of LAUNCH is to improve the educational opportunities of children and youth by addressing weaknesses in the quality of primary education as well as the general lack of opportunity for youth to develop skills in rural-based livelihoods such as small farm enterprise development. SO3 also targets support to school administrators and teachers and to local community parent-teacher associations (PTA) by improving management capacity and forging stronger ties between the community and the schools.

6.1 School Enrollment

The national literacy rate in Liberia according to the 2008 national census is exceptionally low. For ages 10 and up, the rate is roughly one-half of the population (56.3%), and is noticeably higher for males (65.6%) than for females (42.3%).

Four types of schools are available for parents to choose from: 1) government or publicly-funded schools, 2) community-funded schools, 3) private schools, and 4) religious-funded schools. Due to cost, most rural communities surveyed send their children to the public schools. Figures were obtained on the number of schools in most districts of Nimba County (Table 30). Public schools represent nearly 70 percent of total schools in the county from the limited figures that could be obtained.

Geographic Area	Public Schools	Community Schools	Private Schools	Religious Schools	Total
Nimba					
Boe & Quilla	-	-	-	-	-
Buu-Yao	44	3	1	6	54
Doe	-	-	-	-	-
Garr Bain	23	0	43	1	67
Gbehlay- Geh	35	7	3	4	49
Gbi & Doru	-	-	-	-	-
Gbor	-	-	-	-	-
Kparblee	-	-	-	-	-
Leewehpea-Mahn	-	-	-	-	-
Meinpea-Mahn	-	-	-	-	-
Sanniquellie Mahn	27	0	6	6	39
Twan River	42	2	1	8	53
Wee-Gbehy-Mahn	-	-	-	-	-
Yarmein	13	5	6	6	30
Yarpea Mahn	20	0	0	1	21
Yarwein	30	0	6	0	36
Mehnsosnoh					
Zoe-Gbao	46	4	5	1	56
Total	280	21	71	33	405

School enrollment figures for the communities surveyed for the baseline study are found in Table 31 below. Rates of matriculation to the next grade are very low, averaging about 40 percent. There is no statistically significant difference in matriculation rates according to food security status. However, the percentage of students matriculated in middle and high categories is roughly ten percent higher than for

those who are the most food insecure. Numbers of students who remain in school, regardless of matriculation, is much higher, averaging about 88 percent. Again, this figure is slightly lower amongst the most food insecure households (circa 83%). In comparing rates of enrollment and matriculation by county, the difference between the two counties is insignificant.

Table 31. Educational promotion and continuation, by food security category and county

	Lowest	Middle Mean	Highest	Bong	Nimba Mean	Total
% of children enrolled in school who are promoted to the next grade at the end of the year	30.8	39.5	40.8	38.4	40.4	39.5
% of children enrolled in school who continue to be enrolled, whether they are promoted or not	82.7	88.4	88.8	86.9	89.4	88.2
<i>N</i>	52	147	277	229	255	484
<i>*mean value different from the lowest food security group, at the .10 significance level</i>				<i>*mean value different from Bong at the .10 significance level</i>		

Limited data on school enrollment and instruction by gender was obtained for Nimba County. Figures in Table 32 below reveal gender parity in school enrollment for Saclepea-Mah and Sanniquellie-Mah education districts, while there is a much more noticeable disparity in enrollment among boys and girls in Yarpea-Mah District. For the academic year 2010/2011, there were a total of 44 public/community schools in Saclepea-Mah Education District with an enrollment of 15,730 students, and 20 private/religious schools with 3,696 students.

Figures are also shown on the gender composition of instructors. There is a more marked difference in the proportion of male and female instructors across all three school districts, with men making up nearly three-quarters of all teachers in two of the districts, and 90 percent of the teachers in Yarpea-Mah³³.

Student-teacher ratios are relatively high for public/community schools in all three districts, while there is a clear educational advantage for students attending private/religious schools in Saclepea-Mah District where the ratio is significantly lower.

³³ There was no registration data available on private/religious schools for Yarpea-Mah and Sanniquellie-Mah Districts. Information was provided by the statistician for the Nimba County Education Officer (CEO).

School District	Male Students		Female Students		Male Teachers		Female Teachers		Total Students	Total Teachers	S:T Ratio
	N	%	N	%	N	%	N	%			
Saclepea-Mah											
Public/Community Schools	7,993	50.8	7,737	49.2	288	77.6	83	22.4	15,730	371	42.4
Private/Religious Schools	1,850	50.1	1,846	49.9	139	70.6	58	29.4	3,696	197	18.8
Yarpea-Mah											
Public/Community Schools	3,891	71.6	1,544	28.4	96	90.6	10	9.4	5,435	106	51.3
Private/Religious Schools											
Sanniquellie-Mah											
Public/Community Schools	8,246	51.2	7,846	48.8	323	72.9	120	27.1	*15,977	443	36.1
Private/Religious Schools											

*Drop out of 115 students

6.2 Constraints in Access to and Quality of Education

6.2.1 Cultural Constraints

Several cultural constraints affecting access to and the quality of education were identified during the course of FG discussions.

The most notable cultural obstacle to education raised concerns teen pregnancy. Rates are believed to be high and increasing, especially among younger teen girls when they leave their home communities for the larger towns to attend secondary school. Verifiable figures on rates of teen pregnancy are unknown partially due to very weak record keeping and statistical monitoring systems by school administrators at the district and county levels.

Some parents in FG discussions indicated that they now feel it is better to have girls remain at home to help with farm labor and domestic household tasks than to attend school where risks of pregnancy are rising.

A general atmosphere of distrust was expressed between community members and school authorities in some of the villages and town visited. Parents and school administrators would occasionally provide contradictory information and conflicting perceptions of one another. For example, some parents stated that it was common for teachers to take additional jobs to augment their government salaries, while school representatives in the same community would deny such claims. The problem of high absenteeism among teachers was raised on several occasions and is addressed in some detail in exploring economic constraints below. School administrators noted on several occasions that PTA members were relatively unengaged and poorly motivated in working with officials to improve the management and quality of education.

A major cultural practice impeding school attendance in one district of Nimba County is the phenomenon of secret societies. One district level administrator raised the issue of secret society traditional practices among young adolescent girls (age 12+), termed *sande*, as a major impediment to school attendance.

Many girls leave school for up to three months to participate in traditional *sande* rituals such as female circumcision (FGM). The district official noted that the problem also exists among male students who become members of a secret society as well (termed *poro*), although usually at an older age when young men are completing their high school education. Thus, their involvement occurs at a later age and is less disruptive of school attendance than it is with younger pubescent girls.

6.2.2 Economic Constraints

Numerous concerns were raised with respect to economic obstacles that have a major negative impact on the overall operation and management of schools throughout Liberia. Perhaps the most significant problem identified is a serious shortfall in government operational funds that are essential to the economic foundation of any school system. Education officials commented that operational funds have been suspended for the past 2-3 years, creating serious budget shortfalls and an inability to run schools without basic supplies, such as chalk, books, paper for exams, seating and desks, and other rudimentary supplies and materials. One official in Nimba County reported that no operational funds had been sent from the Ministry of Education (MoE) for the past five semesters (2.5 years). Under such serious operational shortfalls, community members of PTAs are increasingly being called upon to generate funds for the operation of their schools.

Public education is to be provided free from grades K-6. Parents are routinely charged small fees to support volunteer teachers at the secondary school level. Some parents will send 1-2 of their children to a private school if they have the means, while the remaining children will attend a public school. In one larger town in Bong County, parents are charged LD \$700 annually per student to send their children to junior high school (grades 7-9), and LD \$1,500 for grades 10-12. The fees charged normally pay for registration and salaries for voluntary teachers.

Private schools are considerably more expensive and unaffordable for many families. In the same town noted above, annual school fees are LD \$3,000 per student in pre-school, and LD \$7,000 for grades 1-6.

No micro-credit programs were identified for the specific purposes of supporting education and the provision of school uniforms, supplies, or registration fees for children to attend school. One school administrator noted past problems with the embezzlement of funds set up for micro-credit lending for educational purposes.

The most common, chronic financial problem faced by school principals and teachers is a significant, recurrent delay in the receipt of monthly salary payments from the MoE. This is a ubiquitous problem, common to many educational systems throughout Africa. The absence of timely salary payments has forced some teachers to leave school to find additional work in the communities visited. There appears to be a relatively high turn-over rate of personnel, with teachers leaving to find work with NGOs and private sector firms where they can earn much better and more reliable salaries. The basic process of being paid is not a simple process. In one district of Nimba County, all of the teachers must go to only one available bank for the entire county to receive their monthly paychecks. Thus the government payroll system is overwhelmed in its ability to meet timely disbursement of funds to school teachers and administrators. The system appears to be highly antiquated and lacking in modern digital technology that is needed to efficiently and quickly move large sums of money from central government offices to employees in the northern towns. Delays in salary payment exacerbate the problem of absenteeism, with some teachers forced to leave school for weeks at a time to request late salary payments from the MoE in Monrovia.

Some parents reported that the delay in monthly salary payments also forces some teachers to charge student fees for course work, such as make up assignments and exams, in order to make up for shortages in salary. One FG noted that teachers in their community take bribes in exchange for passing grades for the students.

In addition to teachers who are officially paid as state employees through the MoE, communities must generally rely on a smaller number of volunteer teachers who are funded by the community. The PTAs assume this responsibility, actively engaging in fund raising activities such as collective farming to pay the volunteer staff. One FG observed that due to shortages in fund raising from PTAs, some volunteer teachers, particularly in the urban towns, take additional jobs to support themselves. This has spawned a culture of absenteeism that is particularly widespread throughout the school systems on the weekly market day. Schools commonly close on market day, as both teachers and students are absent to engage in market activities. Thus, many students are attending school only four days a week, with the lost day not being made up on weekends. It is not unusual for a teacher to take supplemental teaching jobs in multiple schools to meet their financial needs. One example noted involved instructors in the area high school who teach an evening adult literacy program.

Another economic problem identified pertains to government policy on salary structure which is ambiguous and non-transparent according to several school authorities interviewed. There appear to be significant disparities in pay scales and a lack of objective criteria based on seniority and merit for remunerating teachers and administrators. Two principals interviewed with many years of experience and seniority stated that they were receiving lower salaries than some of the new instructors. There is a general perception by some of the school officials interviewed of government corruption and diversion of funds at a high ministerial level.

6.2.3 Knowledge and Informational Constraints

Teachers in the Liberian education system appear to have low levels of formal education and training as teachers. There are two categories of teachers in Liberia: 1) recruiter teachers, and 2) pre-service graduates. Recruiter teachers were initially identified and hired as volunteers from within their villages of origin or nearby areas, based on their expression of interest to become teachers. Most have a C certificate training level (10 weeks of training), and some have not been paid for the two months prior to the baseline survey. Pre-service teachers may often work up to six months before receiving any payment, due to delays in the government payroll noted above.

Most school administrators and instructors have only a teacher certificate educational level, with very few having a university degree. In one high school visited, only 4 of the 21 teachers held a university bachelor's degree, and most had only the lowest level teacher's training certificate.

As a professional body, teachers and administrators receive very little in-service professional training or upgrading of pedagogical or administrative skills. One high school principal in Bong County noted receiving three days of in-service training per school year.

Most educational support and training of school instructors and officials is provided by the NGO sector. The most prominent NGO educational support programs identified during the course of field visits include:

- LTTP (Liberia Teacher Training Program) – A USAID-funded program, implemented by the Academy for Educational Development (AED), which provides in-service and pre-service training (9 months); pre-service teachers are recruited and screened by first taking an attitudinal profile exam, then sent for one year of teacher training to one of two national teacher colleges, the ZRTTI (Lofa County) and the KRTTI (Magibi County); they are then placed in primary schools with a C certificate; these graduates have received no salary payment since September 2010 in one district visited;
- Samaritan's Purse – in one district of Nimba County that supported vocational training for one year (2007), in baking, carpentry, masonry, etc.

It is important to note that educational facilities for vocational training in the two counties are severely lacking. Few programs oriented toward unemployed youth are available, and all are located only in the larger towns. Most are church and NGO supported programs, with few government-sponsored vocational programs available. The largest vocational program in Nimba County is funded by the Liberian Swedish Vocational Training Center (LSVTC), in Yekepa.

6.2.4 Institutional and Organizational Constraints

Respondents in FG sessions and key informant interviews cited numerous constraints of an institutional/organizational nature that play some role in diminishing educational opportunity and quality of learning in the two northern counties.

Discussions on seasonality of food security generated discussion of the change in the official school calendar and the lack of synchronization of school attendance with agricultural labor calendars. The Liberian government officially changed the school calendar after the war, so that students now attend school during the peak period of labor demand in the farm season, from December through March, when rice harvests and brush and field clearing takes place in the dry season. Parents now rely more heavily on mobilizing communal labor exchanges (*kuu*) due to the absence of child labor in their fields. The degree to which group labor exchanges are adequately filling the gap of children's labor due to school enrollment, and the attendant impact on crop productivity is not clear, and merits some closer study to examine the trade offs.

Teen pregnancy among young school girls was cited frequently in FG discussions as a key obstacle to school attendance and full matriculation to the secondary school level. The current Liberian government administration has adopted a policy that is supportive of retention and the ongoing education of pregnant girls, allowing them to remain in school during the first two trimesters of pregnancy. It is very common to find adolescent girls who are pregnant at the primary school level. The World Food Program (WFP) has instituted a feeding program for young pregnant girls in grades 4-6 who receive a food ration once a month to stay in school. Paradoxically, recent findings by the MoE on inscription of students for their national exams found that the highest rate of pregnancy among adolescent girls taking their final exam was for the 6th grade. As a result of this finding, the MoE has concluded that food rations may be serving as a perverse incentive for girls to become pregnant in order to receive food rations while in school. Therefore, the MoE has recently instituted a new policy in 2010 for young adolescent teen girls who are pregnant to now attend evening classes to discourage increasing pregnancy rates.

A positive incentive for the retention of students in school has been the WFP school lunch feeding program, known as P4P, which is being run throughout the two counties of Bong and Nimba. The program provides lunch rations of bulgur wheat, oil, and beans. The program is to provide a daily warm cooked meal. However, several examples were noted during FG discussions with school officials that rations were either insufficient for daily feeding, or that delays in the monthly distribution of food to the schools was not that uncommon. To supplement the mid-day meal, students were often asked to bring firewood (boys) and leafy vegetables such as potato greens (girls) to school. The largest MoA program in Nimba County, Project Gbedin, is a state run mechanized cooperative rice scheme on 400 acres of land that produces 350 – 400 MT of rice per year for the P4P program.

An important component of the LAUNCH program under SO3 is to strengthen the PTA and improve relations with district education authorities and community leaders. Therefore, FG sessions devoted considerable time to understanding the composition, roles, and responsibilities of PTA members in the community and perceived strengths and weaknesses in working with school administrators. The PTA is comprised of 7-9 members per community and is generally balanced in gender composition according to the respondents interviewed. There are five officers, with the school Principal usually serving as the Secretary, and the Treasurers most often being women. In one district of Nimba County, only one female

chairperson exists among 59 PTAs. PTA members are elected by the community and criteria for participation appear to vary. Few members are literate, and levels of formal education are relatively low.

The PTAs generally grow crops as a group activity to raise funds for voluntary teacher salaries and to meet other operational needs of the schools. In one community visited, the PTA raises LD \$100 annually per child to cover salaries and to pay women who prepare the school lunch meals. Other costs incurred by either parents or members of the PTA include LD \$25 per student per semester for report card fees, LD \$100 for school registration fees of each kindergarten child, and LD \$150 for each child enrolled in grades 1-6.

A problem noted by several school administrators is low motivation and interest among PTA members in supporting educational initiatives in the community. This may be due, in part, to the fact that many PTA members must often walk long distances to attend meetings with school principals and teachers, and they are well occupied with their own farm activities and long days cultivating their fields. One FG session with school officials remarked that parents in the community must walk 2.5 hours to school meetings, and therefore attendance is very poor.

One county level education official observed that a critical problem with PTAs in general is a lack of clear understanding by members regarding their roles and responsibilities in relation to school authorities. In many instances, there is a lack of a sense of ownership among the members who assume school officials are responsible for all aspects of school administration. While PTAs assume some responsibility for the fiscal needs of their schools, many members are frequently absent from school administration meetings. Per observations noted above, this may be attributed to several factors, including low levels of literacy among PTA members, and the long distances to walk from villages or fields to school meetings. Thus, there appears to be some confusion among PTAs as to their precise role in supporting their schools both in terms of fiscal and administrative responsibilities.

Administrative hurdles in managing education are not limited to local school authorities and PTA members. Education officials and FG respondents also noted a poor chain of communication and interaction between the District Education Officers (DEOs) and PTA chairpersons. Again, this may be explained in part by the physical isolation and distance of communities from the larger regional towns and seats of educational administration. The lack of finances and transport services pose a major challenge for local PTA representatives to attend monthly DEO meetings.

Educational authorities interviewed also noted the financial and logistical challenges of maintaining a monthly calendar of school inspections and meetings with principals and teachers at the community level. In one instance, a high school principal complained about the total absence of the County Education Officer (CEO) whose office was always closed and inaccessible to principals and teachers in urgent need of resolving late salary payments and other administrative issues.

A final observation on weaknesses in educational policy relates to the discussion above (Section 6.2.2) on lack of any coherent sense of merit-based pay for teachers and school administrators. There appears to be very poorly articulated policy and incentive structure on the part of MoE officials in Monrovia concerning merit-based pay, as well as other benefits in the form of free or subsidized housing and transport for educators who are paid relatively low professional salaries.

6.2.5 Physical Resource Constraints

The general state of school infrastructure in the communities visited is strikingly poor and deficient in terms of both the quality and quantity of physical resources available to students and school authorities. Severe shortages of seating and other physical features is omnipresent and a significant impediment to the quality of education throughout both counties.

An example of the severity in quality of physical infrastructure of schools was obtained from official monthly progress report records in several districts of Nimba County. Figures submitted by the District Education Officer (DEO) for one district to the office of the CEO for February 2011 state that 90 percent of the schools do not have chairs, tables, or desks. In one elementary school, children carry their own chairs to school on a regular basis. The report also notes that the DEO has no computer or electricity for his office. In another district, the DEO notes that he has no personal office space outside the confines of a school.

Another DEO report for the month of January 2011 provides an example of the logistical challenges that DEOs must confront, as the report notes insufficient gasoline and no maintenance fees for the officer's motorbike to do monthly inspection visits of the schools in the district, and no photocopier to make copies of principal's forms.

In addition to a serious shortage of chairs and classrooms, some schools have very few latrines, if any at all, and hand pumps frequently are in disrepair or unusable due to lack of water from shallow wells during the dry season. In one high school visited, only two latrines existed for 850 students and school staff. In another district, school officials described the general dearth of essential school materials to be provided by the MoE, including only 200 pieces of chalk per school. A severe shortage of basic text books is a major constraint in the schools. The MoE provides only one text book for every two students at the junior high level, and no state-funded texts are available at the high school level, which students or parents are required to buy.

From Table 32 above, class size and student-teacher ratios are extremely high, sometimes exceeding 50:1. School administrators in one of the regional towns of Nimba County noted student-teacher ratios as high as 70:1.

The limitations of distance in accessing markets, schools, and health clinics have been repeatedly highlighted in this report. In addition to long distances for students to walk, those who matriculate to the secondary level must often relocate to larger towns where the few secondary schools are found. The overall costs of education, including lodging and meals, becomes prohibitive for many parents, thus enrollment rates appear to decline considerably beyond the primary school level.³⁴

FG sessions also explored the nature of adult literacy programs. Few villages have had an adult literacy program, often due to a lack of lighting or electricity to run programs in the evening when adults are available after their field work and other daily tasks. Most programs discussed were found in the larger towns and held at night in the high schools with very limited lighting. One program discussed uses low cost solar lamps of very poor quality. While there was initially a large interest and high attendance in the local adult literacy program, attendance has dropped off significantly due to the poor quality of the solar lamps used.

A number of adult literacy programs were described, including the Adult Literacy Program (ALP), one of the largest programs that is funded by UNICEF and administered by the MoE. Instructors for this program have not been paid for 11 months, according to one source. This program targets adults who dropped out of school due to the war, and young women aged 15 -35 who have not attended school or who dropped out due to pregnancy. Sessions run in the late afternoon until 7:00 pm. The program has classes at three primary school levels: grades 1-2, 3-4, and 5-6.

³⁴ No concrete statistics are found to support this general assertion. However, education officials made this observation (with no statistics available for this report) on several occasions.

6.2.6 Natural/Environmental Constraints

The natural or environmental factors that have some bearing on school attendance, such as heavy seasonal rains that wash out bridges and make roads impassable have been identified in the previous SO sections of this report. The seasonal distribution of rainfall is a major factor contributing to poor access to health, education, and market services for a large portion of the rural population, adults and children alike.

7.0 Summary of Findings

This section summarizes some of the key findings of from the baseline study, organized by Strategic Objective.

6.3 Key Findings for SO1: Agriculture and Livelihoods

6.3.1 Food Security

Despite a diverse mix of cropping systems, including intercropping of rice, tubers, roots, and legumes in hilly uplands, and swamp rice bottomlands interspersed with vegetable gardens, smallholder farming communities in Bong and Nimba Counties are faced with chronic food shortages that undermine the health and nutritional status of the most vulnerable members of the community, particularly mothers and malnourished children. Secondary livelihood activities including small animal husbandry, poultry production, fishing, hunting, and petty trade activities augment the farming of cereal crops to help meet daily consumptive needs. Nonetheless, most families fall far short in meeting their minimum daily food requirements for several months of the year.

On average, rural households in the target areas go hungry for at least three to four months each year, with major rice harvest stocks being depleted during the hunger season, which overlaps with the wet months stretching from May to August. Cash expenditures and debt levels rise during this period as there is no longer sufficient food to feed the family. Some seasonal illnesses, such as malaria, spike during the lean season, leaving families highly vulnerable as food scarcity and disease intersect at this particularly fragile period of the year. This is followed by an abundance of rice near the end of the year, at which time debts are paid off, mostly in rice seed, from the previous rice season.

Local diets are poorly balanced, with starchy crops like rice, cassava, yams, and plantains making up the bulk of the diet. Other than a few leafy sauces (cassava, potato greens), there is very low dietary diversity in other vegetables, fruits, and protein sources which are usually seasonal. When stratified by levels of food security, the most food secure households have significantly higher scores of dietary diversity (6.1) than do the least food secure households (3.6). Households in Nimba County also have statistically higher levels of food diversity (4.8) than do households in Bong County (4.4).

6.3.2 Household Assets

The most food secure households have significantly more asset holdings (6.6) than do the least food secure (3.6). They also have significantly higher incomes (LD \$1,400 vs. LD \$70) generated from crop sales. Farm households in Nimba County also have significantly higher levels of assets (5.4) than do those in Bong County (5.1). Agricultural sales are lower in Nimba (LD \$604) than in Bong (LD \$651), but there is no statistically significant difference.

6.3.3 Crop Productivity

Chronic levels of food insecurity in the counties studied are a function of both *quantity* and *quality* of food items grown. Productivity of rice and cassava is extremely low, with rice yields averaging just over 1.2 metric tons (MT) per hectare, well below optimal rice yields. Cassava yields for the study sample were even worse than rice output, with yields averaging only 0.57 MT/ha, and only 8 percent of respondents obtaining over 1 MT/ha.

Plans are now underway, sponsored by the FAO and EU, to significantly boost rice productivity in the swamp bottomlands through the introduction of short cycle varieties of higher yielding rice that can produce at least two harvests per year. While boosting crop productivity is paramount to ameliorating food security status throughout the two counties, labor burdens for families already heavily tasked throughout much of the year will also significantly rise in order to attain a double rice harvest annually. This important factor will also need to be examined more closely to understand both the positive and negative consequences of such an ambitious objective.

6.3.4 Access to Training and Inputs

Baseline figures reveal that over all, smallholder adoption of improved farm methods and technologies is relatively low, with the mean number of practices averaging less than two for all household categories of food security. Statistically, the most food secure households have adopted significantly more improved methods (1.8) than the least food secure (1.3), and are growing more crops (2.5) on average than the most vulnerable households (2.0). In comparing the two counties, farmers in Nimba are employing more improved farm methods (1.7) than in Bong (1.4). Significantly more farmers in Nimba are also using at least three improved methods/technologies (16.2 %) than in Bong (7.5%).

Another key finding is that among the methods or technologies practiced, few farmers across all categories of food security in both counties are benefiting from improved methods of crop storage against rats, or using cassava grinders and rice mills. Reducing work burdens, particularly for women, through the use of labor saving technologies such as grinders and mills could make a significant impact in improving life quality for many of the LAUNCH beneficiaries to be targeted under the project and is addressed as a key recommendation further below.

Women play a prominent role in farming in sites visited. Despite their important contribution to the food security of their families, they are commonly neglected in terms of participation in training activities to improve farming methods and boost farm productivity. Baseline data confirm this observation, with women's participation in farmer group training ranging from approximately three to five percent by food security category. There is a significant difference in women's participation by county. Slightly greater than 5 percent of women in Bong have attended trainings while just below three percent have participated in Nimba.

6.3.5 Access to Savings and Credit

Income poverty is a pervasive feature of the farm landscape among households in the counties surveyed. Access to credit through formal micro-credit lending programs is almost non-existent. While statistical differences were found among the proportion of those respondents accessing savings or credit by food security category and by county, the large proportion of funds available in cash or kind was obtained through informal, kin or community-based mechanisms such as *susu* clubs, a form of informal rotating credit based on principles of group lending. The proportion of the most food secure households accessing credit (64.9%) is significantly higher than that of the most food insecure households in the survey (37.9%). The most food secure households also have more capital savings and income to draw upon in times of need (33.9%) while the proportion of more vulnerable households with access to cash savings is significantly lower (9.3%). From these findings, one may infer that the ability to mobilize social capital in accessing loans in the form of cash or in kind contribution is strongly associated with one's food security status in the community.

A comparison of access to financial services between the two counties shows no overall statistical difference, with roughly one-half of all households able to access some form of savings/credit. However, sources of lending do vary significantly, with a larger percentage of families obtaining loans through

traditional *susu* clubs in Nimba (32.8%) than Bong County (17.7%). Conversely, households in Bong County rely more heavily on kin-based social networks to obtain loans (34.8%) while the figure is significantly lower in Nimba County (16.5%).

6.4 Key Findings for SO2: Health and Nutrition

6.4.1 Infant and young child feeding practices

Information on child feeding practices and antenatal care was collected for the youngest child in each household between the ages of 0 and 24 months. The selection of the youngest child for these questions about antenatal practices and child feeding practices was done. The youngest children were selected for these questions in order to obtain information about the caregivers' most recent behaviors with respect to antenatal care and child feeding practices. Findings on exclusive breastfeeding practices of mothers and their infants 0-5 months suggest that food security status plays an important role in breastfeeding patterns. Approximately 81 percent of the most food secure mothers surveyed had breastfed exclusively in the past 24 hours, while only 47 percent of the most food insecure mothers were able to practice exclusive breastfeeding. One may infer that the health status of the most vulnerable, impoverished mothers is potentially compromised, and that quantities of breast milk from poor diets is insufficient, forcing some mothers to begin complementary feeding early. Significant differences also exist in exclusive breastfeeding patterns among women in the two counties, with 78 percent of women in Nimba County having practiced exclusive breastfeeding in the past 24 hours, whereas only 52 percent had done so in Bong County. The explanation for this disparity is not readily apparent, and will require further investigation by the LAUNCH team in the very near future as beneficiary communities and households are being selected for project participation.

The proportion of children aged 6-23 months who have low dietary diversity and meal frequency ranges from only 10 – 15 percent. Children in the least food secure households have less dietary diversity and fewer meals (roughly 15%) than do children who are in the most food secure households (10%). Non-breastfed children have adequate levels of dietary diversity and numbers of meals in relation to breastfed children.

6.4.2 Antenatal and post-natal care

There is a significant difference between high and low food security household groups in their antenatal attendance at clinics. Nearly 76 percent of women in the most food secure households were able to attend antenatal visits, while only 58 percent of the least food secure women were able to. There is no statistical difference in the percentage of women attending antenatal clinics when comparing between the two counties.

Among children age 12-23 months who have been fully vaccinated, rates are relatively low, ranging from 11 to 23 percent by food security category. In comparing vaccination rates between counties, significantly more children in Nimba County (21%) have been fully vaccinated than in Bong County (11%).

6.4.3 Potable water supply and sanitation

Findings show that there is no significant difference in the use of drinking water sources between dry and wet seasons. There is also no significant difference in drinking water source between the counties. However, drinking water sources do vary significantly by food security category for each season. In the dry season, the least food secure households rely primarily on hand dug covered wells (48.4%), while the most food secure have greater access to clean water through a borehole (34.7%) or cistern/rainwater supply (15.7%). These findings are also similar in the rainy season. Thus, the more food insecure households are vulnerable in terms of both food and water supply, as they are more likely to be exposed to unsafe drinking water from hand dug wells. A counterintuitive finding is a higher percentage of the most food secure households using water from rivers or ponds (20%) that may be contaminated for drinking, while middle and low food security categories have a lower percentage use of river or pond

water sources (18% and 14% respectively). This finding may require further exploration by the LAUNCH team to confirm why more food secure households would use potentially contaminated water from rivers or ponds than the most food insecure households.

Baseline findings confirm that latrines are not widely used in rural communities, with roughly 70 percent of respondents noting that they have no access to a latrine, regardless of food security status. Differences in toilet source do not vary significantly in any way between the two counties.

6.4.4 Hygiene

A relatively high proportion of households reported outbreaks of diarrhea during the past two weeks, with the proportion being significantly higher (44%) among the middle tier food security category. A significant difference was found in the use of covered containers for water storage by food security category, with more middle (59%) and high category households (70.6%) covering their drinking water than low food security category households (48%). There are no significant differences in outbreaks of diarrhea or water storage practice between the two counties.

Findings on hand washing show that it is most frequently practiced before eating and after defecation, and less so before food preparation, feeding children, and after cleaning infants. A significantly larger percentage of middle and high food security households wash their hands than low food security households in four of the hand washing categories. This same observation holds when comparing hand washing behavior of women between the two counties, with more women washing their hands in Nimba County for most of the hand washing categories.

6.4.5 Perceptions of vulnerability

In FG discussions, children, widows, the elderly, and the physically handicapped were identified as the most vulnerable to illness and therefore, at greatest risk in terms of their ability to overcome the seasonal window of food scarcity and hunger during the peak of the rainy season from July to September. At this time, children and women are fed first, according to both men and women in FG discussions. The most common hunger foods are cassava and palm cabbage. Widows who still have children to care for were identified as particularly vulnerable since they have few kin to draw upon as a labor pool to assist them with farming.

6.5 Key Findings for SO3: Education

6.5.1 School Enrollment

Baseline figures were obtained on rates of matriculation to the next grade as well as children enrolled regardless of matriculation. Overall, rates of matriculation are very low, averaging approximately 40 percent, with no significant differences found by food security category. The percentage of students matriculated in middle and high categories is roughly ten percent higher (40%, 41%) than for those who are the most food insecure (31%). On average, the proportion of students remaining in school, regardless of matriculation, is significantly higher, at approximately 88 percent. This figure is slightly lower amongst the most food insecure households (83%). In comparing rates of enrollment and matriculation by county, the difference between the two counties is insignificant.

A small sampling of student-teacher ratios for three school districts in Nimba County illustrates the nature of oversized classes and a shortage of teachers, with ratios ranging from 36:1 to 51:1. In a small sample of private/religious schools, the ratio is much better (19:1) and serves as a proxy measure of the higher quality of education found in private or religious schools due to smaller class size.

Annex 1. Terms of Reference



Expanding Opportunities Worldwide
Liberian Agricultural Upgrading, Nutrition and Child Health
MYAP

TERMS OF REFERENCE BASELINE STUDY PLAN

Background

At the end of its 14-year civil war in August 2003, Liberia was left devastated with a barely functioning economy, destroyed infrastructure and an impoverished and food-insecure population that had suffered devastating losses, displacement and trauma. Today, Liberia is making the transition from relief aid to market-driven development that will secure a more prosperous future for its citizens. Food insecurity, however, is still prevalent with high rates of stunting (39 percent) and underweight (19 percent) among children. ACDI/VOCA and its partners, Project Concern International (PCI), John Snow International (JSI), and Making Cents International, represent an ideal combination of skills for realizing the goal of increasing food security for vulnerable households and communities while supporting the trajectory toward market-driven development through the Liberian Agriculture Upgrading, Nutrition and Child Health (LAUNCH) Multi-Year Assistance Program. ACDI/VOCA has experience in agricultural development throughout the world, is a recognized leader in implementing a value chain approach, and has managed food aid programs on three continents. ACDI/VOCA's in-country presence as well as that of our partner, JSI, enables us to understand the operating environment in Liberia and leverage our existing networks and project activities to start up LAUNCH activities quickly. Our combined in-country experience, knowledge and networks in the agriculture, health, finance and business sectors will be a positive addition to the project. At the same time, our partners, PCI and Making Sense International, will bring their Africa regional experience and fresh perspectives to the team.

Baseline Study Objectives

The overall aim of the Baseline Study is to establish baseline values of the indicators identified in IPTT (Annex – 1) including the impact and outcome indicators and to understand the status of the prevailing conditions of the households in LAUNCH target areas. It is to note that the baseline values will be compared with the endline study results to be collected in the final year of the project to measure the progress and impact of LAUNCH. The baseline study has the following objectives:

1. To establish the baseline values for the impact and outcome (intermediate results) indicators identified in the LAUNCH IPTT. Additional indicators may be added to the baseline if the project has already identified project specific outcome level indicators (to capture behavioral or systemic changes) that are not included in IPTT. The baseline values will be used to assess progress, and results at impact, and outcomes.
2. To establish food insecurity and socio-economic status of the target households. It is recommended to collect information on at least three proxy measures of food insecurity, coping strategy index, and income and expenditure of the households.
3. Using quantitative data and qualitative information gain an in-depth understanding of the causes of food insecurity in the target areas.
4. Define vulnerability, identify response patterns to shocks and disasters and provide information for the trigger indicators identified.

Study Methodology

The quantitative baseline survey will be population based. It is suggested that a mixture of **quantitative** and **qualitative** methodologies be applied. In addition to a household survey, focus group discussions and key informant interviews will be used to provide insights and interpretation of the quantitative data. Where quantitative methodologies are applied, the sample must be designed to generalize the results to the target population. Qualitative studies should be carried out in a subset of villages sampled for quantitative survey.

1. As part of the initial investigations, formative research on gender, (*gender analysis*) that will include, for example, assessment of decision-making at the household level on agricultural issues, and men’s influence and input into food options for pregnant women and children, will be conducted. This research may take the form of standardized approaches to analysis, e.g., the Moser Gender Planning Framework, or may incorporate important elements from several analytical frameworks. The purpose of the gender analysis will be to assess how gender considerations could/should be integrated into various phases and operations of LAUNCH and identify specific steps that the LAUNCH Team can make to ensure that the project is a gender-integrated program that promotes equity for men and women in access to the program’s opportunities and benefits. The consultant, who will conduct the gender analysis³⁵, will:
 - identify programmatic and operational constraints and corresponding opportunities for gender integration, gender equity, and gender sensitivity in the LAUNCH program design and operations;
 - develop specific and practical recommendations on how to integrate gender into program design and operations;
 - provide knowledge on gender issues (the dynamics between and the status of men and women) with regards to food security, nutrition and agriculture in the targeted geographic MYAP project areas of Liberia, including PLHIV and other vulnerable groups;

LAUNCH Strategic Objectives and Results Framework

Objective 1: Increased Availability of and Access to Food of Vulnerable Rural Populations

- IR 1.1 – Improved Smallholder Production
 - Sub-IR 1.1.1 – Improved Farm Management Practices Adopted
 - Sub-IR 1.1.2 – Improved Smallholder Access to Agricultural Inputs
- IR 1.2 – Increased Rural Household Livelihood Opportunities
 - Sub-IR 1.2.1 – Increased Market Linkages
 - Sub-IR 1.2.2 – Improved Smallholder Access to Financial Resources

Objective 2: Reduced Chronic Malnutrition of Vulnerable Women and Children under 5

- IR 2.1 – Improved Nutrition, Feeding and Care Practices among PLWs and Children under 2
- IR 2.2 – Improved Prevention and Treatment of Maternal and Child Illnesses
 - Sub-IR 2.2.1 – Strengthened Clinic Response to Community Health Needs
 - Sub-IR 2.2.2 – Improved Community Mobilization for Health
 - Sub-IR 2.2.3 – Improved Water and Sanitation Practices

Objective 3: Improved Educational Opportunities for Youth

- IR 3.1 – Improved Access to Primary Education
- IR 3.2 – Increased Access to Livelihoods-based Education for Youth

Cross-cutting Themes:

- Gender Equity
- Disaster Risk Reduction and Early Warning Systems

LAUNCH will target selected districts in Bong (Salala and Sanoyea districts); Nimba (Wee Gbey Mahn, Zoe Gbao and Gbor districts).

Quantitative Methods

Survey objectives

The study has the following purposes: determine the current status of target beneficiaries in terms of food security (including agricultural practices and market-related issues) and assess factors influencing nutritional status in the program regions. The study will serve as a baseline from which program impact on changes in food security can be measured and described. The data gathered during the baseline study will allow comparison against the data collected during the end line survey to measure impacts. The overall aim of the quantitative survey is to assess the status of the prevailing conditions in the MYAP target areas, capture and establish current quantitative data for

³⁵ The gender analysis will be a self-standing study and will be conducted after the baseline study.

specific indicators against which data collected in the future will be compared. The survey will address some of the questions to guide the implementation of the three objectives and cross cutting themes:

Agriculture

What agricultural use, production, post-harvest factors have contributed to food insecurity?
What are the major constraints to improved crop production, reduced losses among the population?
What percentage have received previous farmer training on improved methods? Why weren't the practices adopted?
What percentage of the population currently use improved agricultural/technological practices that enhances food security?
What factors contribute to reduced market access?
What percentages grow a wide variety of crops; grow crops for cash, rear livestock?
What methodologies would best ensure sustainability of improved farming methods?

Nutrition and health/hygiene

What specific cultural issues affect feeding practices and beliefs about nutrition?
What food use practices among women and children lead to malnourishment?
What other factors contribute to malnourishment – food inadequacy, lack of knowledge, food distribution practices in the household?
What is the current level of underweight and stunting of under 5 children (disaggregated by sex) in the population?
What barriers are there to exclusive breastfeeding for the first six months of a child's life?
What barriers are there to improved nutrition practices?
What hygiene practices contribute to illness and malnourishment in the sample?
What percentage of households has access to and use clean water from protected wells?
What percentage has access to and uses latrines?
What is the capacity of local existing organizations to engage in building wells, latrines?
Have caregivers received previous hygiene education – what barriers are there to change?

Gender

How will gender relations affect the achievement of sustainable results?
How will the proposed results affect the relative status of men and women?

Risk reduction

Who are the most vulnerable and why?
What are the key factors influence food insecurity?
What factors do respondents think are the main causes for food insecurity?
What do respondents consider the best way to distribute food aid so as not to increase dependency?
What strategies are used by caregivers/households to cope with food insecurity at the household level?
What strategies would be most effective at reducing households' susceptibility to shocks?
What strategies are available at the union, upazila and village level?
What union and village level mechanisms for mitigation & response to shocks are in place?
What is the perceived effectiveness of these mechanisms?
What is the capacity of local organizations, government, and communities' to respond to disasters?

Study Methodology

This will be a population based study. It is suggested that a mixture of quantitative and qualitative methodologies be applied.

Survey Design

This project will utilize an “adequacy design,” also referred to as a non-experimental Pre-Post test design. At the end of this survey, LAUNCH should be able to conclude whether the baseline indicator values represent true estimates for our target population.

Sampling Approach

We propose that prior to the baseline survey, program staff will conduct preliminary assessments of the 6 districts to determine which areas within the districts may represent the most vulnerable populations – these would be the areas in which we would propose to conduct the baseline and implement the program. Since Salala and Sanoyeah (two large districts within our coverage area) are very large geographically and each have over 200 village communities within them, it is especially important that we decide on if we will select a particular region of these districts on which to focus our efforts.

LAUNCH staff will so start gathering up-to-date lists of villages within each district and identifying the most vulnerable ones where to base its intervention. The sampling frame is composed by the villages and then PPS will be conducted. The contractor will be responsible of suggesting the most efficient and reliable sampling design. A two-stage cluster sampling design may be recommended to collect the data. Primary clusters will be village, selected using PPS (Probability Proportional to Size). Within each cluster, households will be selected using a random method, such as the “spin the bottle” method.

To determine the sample “level of stunting among children age below five” should be used as the key variable. If relatively current status of stunting data is available that are representative to the target population, the prevalence rate of stunting will be used to determine the sample size. The contractor will be expected to provide a detailed sampling strategy with justifications for the sample size recommended taking into considerations the timing and the budget limitations.

Sample Size Determination

The contractor is invited to utilize the following formula: $n = D[Z\alpha + Z\beta]^2 * (P1(1 - P1) + P2(1 - P2)) / (P2 - P1)^2$ P1 = x (stunting levels at start of project) ; P2 = (stunting levels at end of project) α = 95% significance ; β = 80% power ; D = 2 (standard for nutrition studies). The consultant will be invited to determine the sample size basing the estimates on the standard equation for indicators expressed as proportions. LAUNCH expects to reduce stunting, on a population level, by approximately 10% points over the 5 years. Various sources recommend the number of clusters for nutrition surveys fall within 25-40. Number of households per cluster will be determined once the sample size will be decided. Replacement should also be included in the final sample size (at least 10%).

Sampling Unit Selection Procedures

Since LAUNCH will be operating in two counties with very similar economic, health and demographic characteristics, we plan to first allocate the number of clusters based on the proportion each district contributes to the total population of our target region. Within each district, we will use a listing of the villages, listed in order of size from smallest to largest, and use the probability based on proportion methodology to select clusters from these communities.

Once a survey team arrives at a village, each surveyor will be instructed to start from the outskirts of the village, from different points, and work their way inwards with their surveys. Surveyors will then be instructed to attempt to interview a caregiver/household head at every second house.

Surveyors will be instructed to determine if a caregiver who is pregnant/lactating or has a child under five years or if a male head resides in the household. If no one fits the criteria, the surveyor will go to the next house. If there is more than one caregiver who fits the criteria and is physically present, the surveyor will be instructed to speak with whichever caregiver first presents herself.

Qualitative methodologies.

Qualitative methods, including focus group discussions and key informant interviews will be used to determine context and to understand the challenges to implementing the program. Qualitative methods should inform the development of the quantitative tools. Quantitative methods will then be utilized to measure the issues of concern. Where quantitative methodologies are applied, the sample must be designed so as to provide technically sound estimates of all variables listed above. It is recommended that a series of **focus groups/interviews be developed** to gather information on respondents’ agriculture, market, health, and nutrition behavior, attitudes and practices. As part of this process, focus group and key interview guidelines will be developed. The consultant, in collaboration

with LAUNCH should engage in a process to determine the focus of these qualitative methods and prioritization of the topics to be explored

As part of the initial investigations, formative research on gender, (*gender analysis*) that will include, for example, assessment of decision-making at the household level on agricultural issues, and men's influence and input into food options for pregnant women and children, will be conducted. This research may take the form of standardized approaches to analysis, eg. the Moser Gender Planning Framework, or may incorporate important elements from several analytical frameworks.

Gender disaggregation in data collection, presentation and gender equity in the selection of respondents need to be maintained in all activities of the baseline study. The consultant will:

- identify programmatic and operational constraints and corresponding opportunities for gender integration, gender equity, and gender sensitivity in the program design and operations;
- assess the dynamics between and the status of men and women with regards to food security, nutrition and agriculture in the targeted geographic areas
- develop specific and practical recommendations on how to integrate gender into program design and operations;

Formative research will also utilize the BEHAVE framework (integrates elements of behavioral science and social marketing) to provide a basis for assessment and development of programmatic recommendations. This will allow for the development of behavior change strategies, prioritization and crafting of key messages.

Barrier analysis, which will be integrated into the data gathering methodologies outlined above as well as the quantitative survey, will also be conducted to answer questions concerning the logistic, financial, cultural or other factors that influence the uptake of healthier hygiene/nutrition behaviors and agricultural practices. The consultant will discuss with the LAUNCH team how to prioritize those behaviors that need further exploration. The barrier analysis will be used to identify the most effective strategies to enhance program effectiveness?

In coordination with LAUNCH staff, the consultant should develop an outline of key question areas by topics and train LAUNCH staff to conduct focus group discussions and key informant interviews. The consultant will ensure the quality of information while LAUNCH will provide staff. A sub set of villages from the quantitative sample will be purposively selected (by LAUNCH staff and the consultant) based on the key determinants that may influence household food insecurity and vulnerability. The targets for these methods will include village residents and chiefs, farmers' groups, healthcare workers, youth, district officials, PLWs, NGO and CBO representatives. Timing and budget will limit the number of focus groups and interviews. However the information collected will be used to supplement and enrich the data collected through the quantitative survey. Ideally, the focus groups would have contributed to the design of the survey instruments. Unfortunately, because of timing, they will be conducted in parallel with the quantitative study. Focus group data will be prepared for analysis with a verbatim transcription of audio tape and notes written during the focus group by the moderator and/or assistant moderator.

Survey Instruments

The consultant should design data collection instruments with key LAUNCH staff:

2. Anthropometric data record sheet
3. Household questionnaire (demographics, socioeconomic status, household composition, health status of mother and children, hygiene, availability of food, land ownership, agricultural practices, production, source of inputs, gender division of labor and decision making);
4. Community questionnaire (access to nearest major village, main activity of residents, key geographical characteristics, access to services, access to markets, gender roles/responsibilities)
5. Focus group guides for men, women, farmers' groups, healthcare workers, youth
6. Community-level questionnaire to assess the mechanisms for mitigation & response to shocks
7. Interview guide for discussions with key personnel including county and district level leaders, village chiefs, NGO, CBO representatives, etc.

The questionnaire packet, including written measures and anthropometric measures, will be designed by the lead consultant, in coordination with the study team and with oversight by the LAUNCH team.

The measures will contain a combination of questions derived from standardized sources, such as the DHS or based on data collection forms such as that used to assess Household Dietary Diversity Scores, MAHFP and all the FFP required indicators, as well as questions specifically tailored to the needs of LAUNCH. Pilot testing will take place of all instruments and practice sessions conducted for the anthropometric measures. The instruments will be tested in a community similar to those that are part of the target population, but will not be part of the target group. Pilot testing will occur during the week of training of the enumerators.

The survey will not be translated into Kpelle or Gio. They are widely spoken languages, but there are very few who are able to read either. Also, because the dialects vary from one region to the next, it would be necessary to do multiple translations. We will modify the questionnaire to reflect Liberian English and include key terms and phrases in Kpelle/Gio to ensure that there is standardization across enumerators when asking questions.

The instruments will be duplicated after pilot testing has occurred and modifications made to the measures.

Survey Team

The study team will consist of one Study Director/Team Leader (consultant), specialists in agriculture/rural development, maternal and child health, and nutrition, enumerators, supervisors, and at least 2 data entry clerks. The number of enumerators, supervisors and data clerks will be modified based on final sample size determination. LAUNCH will take the lead in:

- Providing an exhaustive list of villages with approximate number of households per village within the Unions identified;
- Informing local authorities about the administration of the baseline;
- Taking charge of all the logistics related to the study (vehicles, etc.);
- Providing timely feedback to the contractor on questionnaire, focus groups guides, translation, sampling;
- Contributing to the identification and selection of enumerators, possibly recruiting from the staff who conducted similar exercises in country.

The Team Leader will have the overall responsibility for the administration of the baseline. His or her responsibilities will include:

- Designing the overall Baseline Study Plan (Methodology, sampling, etc.)
- Conceiving and developing the study guides (questionnaire; focus group guides, interview protocol)
- Supervising the field administration of the questionnaire;
- Preparing a field manual for training;
- Training enumerators for data collection;
- Supervising the data entry process using the most adequate software available;
- Analyzing collected data and submitting a complete standard report with outlines and fully written text in a timely manner;
- Providing PDAs for data collection (if this is the means agreed upon);
- Submitting to LAUNCH all the documents related to the study (filled questionnaires, electronic versions of the collected data, training manual, fieldwork logs, etc.)

The consultant will be selected based on a competitive process. However, because of timing and need to specific MYAP experience, sole sourcing is also considered. Proposals will be solicited based on a published TOR. Initial selections based on these proposals will be followed by interviews of the top candidates, after which a final determination will be made. The selection of the lead consultant will also be based on the education and expertise of team that s/he has chosen as specialists. The supervisors will be selected and hired through a competitive process by the lead consultant. Since the primary targets of the surveys are female caregivers, we anticipate that at least half of the enumerators will be female. The survey is to be led by the Team Leader/Study Director.

The supervisors will undergo a one-week training, during which time they will be trained on data collection techniques, as well as data checking and verification techniques. The enumerators will join the team during the second week and will be trained on data collection techniques. During this week the supervisors will assist in training and will learn how to oversee administration of the surveys. Role plays and pilot testing will be incorporated into the training and the cultural knowledge of the team will be solicited in modifying and culturally adapting the study instruments. If the written instruments are to be administered in another language, enumerators and supervisors will first be trained to administer them in English. The questionnaire will be back translated into English.

The length of the training will be correlated with the experience of the enumerators. LAUNCH will support the contract in the identification of enumerators, possibly recruiting from the staff who conducted similar exercises in country.

All field enumerators will have at least one year's experience in conducting survey research fieldwork and all have attained at the minimum a qualification from a education tertiary institution. Further, recruitment of enumerators and supervisors will take into consideration the need for gender balance.

Training in the survey questionnaire will be done in both the English version. This will ensure familiarity with both the English and the translation as well as provide LAUNCH the opportunity to further streamline the local language translation of inconsistencies and ambiguity.

A field manual and guide will be prepared for each interviewer as a quick reference when implementing field work. The manual will highlight and detail how to tackle each questionnaire item, response categories and interviewer instructions. A separate supervisor training manual and guide will be prepared for field supervisors to serve the same purpose as the interviewers' training manual and guide.

LAUNCH will suggest a one-day field pre-test of the survey process and survey questionnaire particularly in the local language translations. Pre-testing of field questionnaire will be done with actual research teams in one of the districts outside the suggested study focal districts. The Pre-test will cover both the implementation of the survey process such as team logistic management, cohesion, work load, supervision, quality control, appropriateness of the questionnaire translations as well as further assess areas of inconsistency, ambiguity, comprehension and exhaustiveness of the survey questionnaire. The field pre-test will involve the entire survey field management structure including the principle survey investigator, senior quality control managers and ACDI/VOCA staff. Results of the pre-test will be reviewed overnight by the survey managers and again the following day together with the field interviewer teams. Further, the pre-test material will be used to test the data entry and capture systems and routines prior to working on the actual questionnaire returns from the field.

Anthropometric standardization will be ensured through rigorous training. Periodic reliability checks will also take place while the baseline study is being administered to ensure that there is not any drift.

The primary role of the supervisors will be to ensure data accuracy and integrity. They will be with their assigned enumerators in the field and will be available at all times to oversee and advise their supervisees as the surveys are being administered. As data is being collected, supervisors will review every questionnaire for accuracy and missing data and correct data as needed. Supervisors will be responsible for explaining the purpose of the study to chiefs and other key personnel as they arrive each day to a new community. Supervisors will also inform the study director of any issues that arise that may affect the quality or validity of the data. Field Data collection will involve the conducting face-to-face interviews with the eligible survey respondents using a structured survey questionnaire.

Timeline and Budget

The lead consultant will be hired by the end of November 2010. It is expected that selection of team members, hiring of supervisors, enumerators and other staff, and training will occur in early December. Data entry, collation and analysis, and report writing of the initial draft will be complete by the end of February 2011. The final draft will be due to LAUNCH by mid-February 2011.

Data Collection Logistics

Data collection will last for 8 weeks and will take place from December into January. Four weeks will be allocated to data collection (quantitative and qualitative)

Each team will have the use of one vehicle. Each surveyor will be expected to conduct on average 5 surveys per day. The use of PDA for data collection is also considered.

Data entry

Data entry will be done in Excel ,EpiInfo or SPSS.

Initial data entry will be followed by data checking of all data by someone not involved with data entry. LAUNCH is considering taking charge of this aspect. It is expected that data entry will occur after data collection. As most of the data collection will occur out in villages with little access to electricity, the data will be initially checked in the field by supervisors, and errors corrected on-site. The data will then be brought to a centralized location where data entry will occur. It is expected that data entry and checking will take approximately 2 weeks.

The Consultant data manager will design all the data entry templates, procedures and systems. He will also train all the data entry clerks in the use of the templates and as well oversee the overall management and supervise the overall post fieldwork data entry and management process. The senior data manager will be assisted by two assistant data managers in the day-day supervision and merging of entry files as well as the daily checking and cleaning of the data.

Quality control

The primary role of interviewer team supervisors will be:

- Ensure that a team follows all the survey implementation procedures and completes their allocated interviews with the allocated times;
- Carrying out and following quality control measures on a daily basis through the entire course of the fieldwork days.
- Manage team logistics
- Review questionnaire for completeness before leaving the PSU
- Safe keeping of the completed questionnaires while still in the field as well as other materials for submission to the office
- Monitor the movement of the teams particularly in reaching the all pre-selected sampling points;
- Conducting call backs on respondents;
- Provision of technical advice regarding the implementation of the sampling plan; and
- Interpretation and coding of difficult field responses.

The Consultant will implement quality control measures to ensure a high level of interviewer performance. A full description of these measures and the results of the quality control must be included in the final technical report. The Contractor shall ensure that every respondent can be matched to a questionnaire and an interviewer. The time and duration of the interview must be recorded and included in the final dataset.

At least 15% of the total number of interviews will be verified. Quality control should be spread throughout the survey area and the distribution of controls should be proportional to the sample distribution in terms of village residence and upazila; it is recommended that at least 10% of the work of each interviewer will be witnessed by his/her supervisor.

At a minimum, quality control measures will include verification of the:

- fact that the interview took place;
- proper application of the sampling plan in selecting the respondent;
- the approximate duration of the interview;
- the proper administration of the various sections of the questionnaire;
- interviewer's general adherence to professional standards.

For each verification conducted, a brief verification form should be completed. Field log: Interviewers should at all times carry a field log in which they record relevant information on what happens in the field. The interviewer logs must supply enough information for an independent observer to locate the selected household and to identify the respondent interviewed.

Coding, data entry and cleaning, and materials to be provided to the Client will be handled entirely by the Consultant. The client requires data as a completely labeled (both variables and values labeled in English) SPSS.sav.

Before interviewing begins, the Consultant shall inform the Client what data-entry system (software) is being employed and will report the system used in the technical report (below).

Each data record should include the following identification fields:

1. Questionnaire or interview serial number
2. Date of interview (MMDD format)
3. Beginning and ending time of each interview
4. Interviewer ID number (must be unique in data file)
5. Coder ID number
6. Keyer ID number
7. Supervisor ID number

Review of the questionnaires by the team supervisors

It will be the responsibility of the Field Supervisor to check all field interviewers' returns while still in the PSUs they have been conducted before moving to the next selected PSU. The purpose of this is to minimize the return of incomplete survey questionnaire because the team had already moved on and the affected interviewer could not go back to a particular respondent to get responses to question items they accidentally missed or skipped.

Since such mistakes will be captured while still in the PSU, the affected interviewer will then be sent back by the supervisor to correct such error. 100% of the interviews will be back checked

Call backs

It is always a possibility that an interviewer may decide to ignore some aspects of the sampling procedure such as the household selection or even decide to conduct the interview and instead falsify responses. A call back by the supervisor done at random is intended to minimize this risk. A call back involves the supervisor retracing the steps of the interviewer to the actual respondent to verify the responses recorded on a questionnaire. Call backs will also be conducted by the quality controllers/fieldwork auditors. A short form with select questions from the main questionnaire will be used to conduct call backs to the respondent.

Hold Evening Debriefings

LAUNCH recommends that after each day of fieldwork, field team supervisors will hold debriefing sessions with the teams to discuss work progress of the day and iron out mistakes and errors as well as lay strategies and plans for the next day. The team supervisors will then be required to file reports of the survey progress within their work areas.

Capturing Open Ended responses and data entry

All responses from open ended items will be written in English on the questionnaire during the interview. These responses will be entered verbatim into the data set as is. During data cleaning, a post code variable of the open ended variable in the questionnaire will be developed and added to the dataset alongside the open ended variable so that the data analyst and client can see how the responses were post coded. The responses will then be translated as part of the final dataset deliverable.

Design of data entry forms

In order to minimize data entry errors all data entrants will be required to attend interviewer training so that they will be conversant with different codes and their meaning. Data entry will be conducted using SPSS.

Data analysis

Anthropometric data should be analyzed following WHO/NCHS standards. All other food insecurity and socio-economic data should be analyzed using SPSS or other analytical statistical software package. Anthropometric information on mothers, demographic characteristics, hygiene practices, farming practices, market access information

will also be derived. Information on schools, education needs for youth and priority areas for skills building will be derived from qualitative methods. It is expected that correlations and cross-tabs (chi-squares) will be utilized to assist the LAUNCH team in learning what factors may be most associated with the indicators of interest. This will help the team in better designing approaches to specifically address related factors.

To minimize data entry errors, the consultant should help designing a data base with appropriate data masks. This could be done either in MS Access, CS Pro, SPSS or any other appropriate data entry package.

Deliverables

The following are the deliverables from this contract

1. Detailed electronic copy of the Final Baseline Report. The quantitative results and qualitative information should be integrated into the main report. The baseline report should discuss the vulnerability of households to food insecurity, determinants of food insecurity and targeting. The profile of vulnerable households must be created so that the project can use it in developing targeting criteria. The anthropometric data should be analyzed by sex as well.
2. Clean data set with variable and value labels.
3. Program files (Syntax or “do” files) that were used for the analysis. The program files should clearly identify section or module names used in the questionnaire and should follow the same order as the survey questionnaire so the LAUNCH staff could generate the same results.

Report Writing

The report will be written by the study director, in collaboration with the subject area specialists. Once the LAUNCH team receives the draft report, it will be circulated to LIBERIA staff and headquarters staff for technical review. Comments will be collated by a central team in Monrovia and passed on to the consultant. Revisions should take approximately 2-3 weeks. It is anticipated that the final report will be completed by mid-February 2011.

The final report will include at a minimum the following elements:

- Executive Summary
- Acknowledgements
- List of Acronyms and abbreviations
- Table of Contents
- Executive Summary
- Background/Brief program description, context and rationale
- Purpose and expected use of the survey
- Objectives of the survey
- Survey methodology and data collection techniques
- Main findings (to include values of all PMP indicators listed in the objectives section with their confidence intervals)
- Key observations (to include cultural issues behind feeding practices and beliefs about nutrition, vulnerability analysis and trigger indicators)
- Conclusions
- Lessons Learned and Recommendations

Annexes to the evaluation report:

- Terms of Reference for the evaluation
- Time table
- List of documents, references and data sets used
- Survey instruments: questionnaire, interview guide (s), etc. as appropriate
- Field work documentation

- Description of sampling procedures
- Data analysis procedures

Team Leader Qualifications

- The Study Director/Team Leader should be well qualified in sociology/rural development, agriculture, public health, statistics, MCH, anthropometric measurements and survey techniques.
- S/he will be someone with proven experience in participatory evaluation, community based approaches, developing and evaluating integrated food security and development programs.
- S/she must have experience working in teams, preferably in a leadership position, and have a strong client orientation.
- Strong analytical skills and sociological focus; knowledge, understanding and practical implementation of survey methods and the team leader should have significant experience in working on social assessments and conducting focus groups as well as designing qualitative assessments.
- S/he will have at least 10 years experience in survey fieldwork (data collection, validation, entry and analysis) and experience in leading teams in field (training, field logistics, human relations, teamwork).
- Prior experience with Title II programs (in West Africa or elsewhere). Excellent writing skills, with publication record (in any language) in one discipline related to assignment.
- Be capable and fully available to travel and live in field sites during the fieldwork
- S/he will have broad understanding of food security and have skills in measuring and assessing the effectiveness of rural production and marketing systems.
- Experience in survey planning and directing is necessary while understanding of local government structure in Liberia will be an added advantage.

Health/Nutrition Specialist Minimum Qualifications:

- MPH or equivalent advanced degree in an area related to maternal and child health and nutrition
- Five years relevant work experience with an emphasis on MCHN, particularly with community based health and nutrition among infants, small children and pregnant and lactating women.
- Five years experience in complex programs in a developing country context
- Demonstrated experience in conducting anthropometric survey
- Experience in survey planning methodologies, participatory evaluation, community-based approaches, developing and evaluating integrated food security and development programs
- Knowledge of anthropometric measurements
- Excellent communications and interpersonal skills, both written and verbal, including ability to effectively communicate across cultures
- Experience and ability in the provision of technical support in MCHN
- An understanding of the local context of Liberia a would be an added advantage

Agricultural Specialist Minimum Qualifications:

- University degree in economics, rural development, agricultural, natural resource management or a closely related field;
- Minimum 5 (five) years proven work experience in international rural development;
- Five years experience in complex programs in a developing country context
- Experience in survey planning methodologies, participatory evaluation, community-based approaches, developing and evaluating integrated food security and development programs
- Excellent communications and interpersonal skills, both written and verbal, including ability to effectively communicate across cultures
- Experience and ability in the provision of technical support in Agricultural, marketing, and economic growth
- An understanding of the local context of Liberia would be an added advantage
- Good English language skills are essential.

Other team members:

According to the characteristics of the Program, the following staff should compose the Evaluation Team

- a. Data Manager
- b. Field data collectors (enumerators – identified and hired by LAUNCH)
- c. Field data collection supervisors
- d. Data quality supervisors (at least 2)³⁶

Proposed implementation schedule³⁷

We estimate the entire study will take a total of 65 Calendar days.

Implementation Phase	Planned Activity (ies)	Outputs/Deliverables	Duration
Orientation and Preparation for fieldwork	1.1 Initial inception between the client team and the core consultant team	Review research tools and agree on logistics and procedures outputs	1 day
	1.2 Developing and Refining of survey questionnaire including the questionnaire pre-test	Refined survey questionnaire	6 days
	1.3 Orientation and training of interviewers	Research team ready for fieldwork	6 days
	1.4 Develop field survey manual	Field instruction Manual	3 days
	1.5 Sample selection and Development of field data collection route plans	Survey sample areas and route plans	5 days
Field data collection, data entry and reporting	2.1 Field data collection	Completed field questionnaires from the field	15-20 days (according to sample size)
	2.2 Preparation of data entry screens and templates	Data entry template	3 days
	2.3 Data entry	Electronic data set	7 days
	2.4 Data cleaning and submission of a clean data set	Clean SPSS data set	4 days
	2.5 Preparation & Submission of the study methods report	Methodological report	3 days
	2.6 Data analysis and preparation the final report and tables (including feedback from LIBERIA, A/V and PCI HQs comments)	Draft Narrative report	7 days

Activities	Timeframe								February 2011
	December 2010				January 2011				
	Wk1	Wk 2	Wk3	Wk 4	Wk1	Wk 2	Wk3	Wk 4	
1	Initial inception between the client team and the core consultant team								
2	Developing and Refining of survey questionnaire including the questionnaire pre-test								
3	Translation of the questionnaire								
4	Develop field survey manual								
5	Sample selection and Development of field data								

³⁶ Data entry clerks will not be needed if PDAs will be used.

³⁷ A timeline will be finalized upon receiving the consultants proposal

	collection route plans									
6	Orientation and training of interviewers									
7	Field data collection									
8	Preparation of data entry screens and templates									
9	Data entry									
10	Data cleaning and submission of a clean data set									
11	Preparation & Submission of the study methods report									
12	Data analysis and preparation a summary of results tables									
13	Inception report - feedback from LAUNCH									
14	Final report(Late January 2011/early February)									

Annex 2. IPTT with confidence intervals

IPTT Indicators measured in population-based baseline survey of households				
IPTT Indicator No.	Indicator Description	Mean	95% Confidence Interval	
			Lower	Upper
FFP IM 1	Average number of months of adequate household food provisioning	9.0	8.8	9.1
FFP IM 2	Average household dietary diversity score	4.7	4.4	4.9
AV OC 1.1	Change in Rural Assets (Rural assets index)	219.6	184.1	255.0
MIS EG 3	Rice yield (kg/ha)	1,208.0	921.2	1,494.8
MIS EG 3	Cassava yield (kg/ha)	571.5	243.2	899.9
MIS EG 6	Sales of selected commodities and products (LD/HH)	1,378.1	526.9	2,229.4
FFP IM 3	Percentage of underweight (WAZ<-2) children aged 0-59 months (FFP Impact Indicator #3)	29.8	26.0	33.7
FFP IM 4	Percentage of stunted (HAZ<-2) children aged 6-59 months (FFP Impact Indicator #4)	39.0	33.6	44.4
FFP MN(IM).1	% of women in reproductive age (15-49 years) with a MUAC <23 cm	17.7	14.3	21.2
FFP MN 3.1	% children exclusively breastfed (yesterday)	63.3	49.6	77.1
FFP MN 3.2	% infants with minimum acceptable diet (yesterday)	11.7	7.7	15.7
AV IM 2.2	% of children age 12-23 months fully vaccinated	16.1	10.1	22.0
AV OC 2.2	% of mothers with children age 0-23 months who had four or more antenatal visits when they were pregnant with their youngest child	65.9	59.7	72.0
AV IM 3.1	Education - Promotion Rate: The percentage of children enrolled in target schools in a given year who are promoted to the next grade at the end of the year.	36.8	30.8	42.8
AV IM 3.2	Education - Continuation Rate: The percentage of children enrolled in target schools in a given year who continue to be enrolled in the next year, whether they are promoted or not.	72.8	74.1	86.9
AV OP 1.1.1.2	% of women participating in farmer training groups	2.3	0.5	4.0
FFP MN 4	% of smallholders using at least 3 recommended sustainable agronomic technologies	25.1	17.3	32.9
AV OP 1.1.2.1	% smallholder HH diversifying crops cultivated (mean number of crops cultivated per HH)	2.2	2.1	2.4
AV OP 1.2.1.1	% of smallholder households engaged in bulk marketing	2.9	0.5	5.2
AV OP 1.2.2.1	% smallholder households with access to cash savings and/or credit (through community associations or formal financial institutions)	53.2	48.0	58.4
AV OC 2.3	% of households reporting an outbreak of diarrhea in last 2 weeks	37.8	32.3	43.3

Annex 3. List of Villages Visited

LAUNCH Baseline Survey – Towns/Villages Visited

#	Date	District	Town/Village	Code	Road			# HH interviewed in quantitative survey
					Est. Travel Time To Destination	Condition ³⁸	Comments	
BONG COUNTY								
1	1 st March	Salala (Team based on Lutheran Campus; Totota)	Malunga/Yarquala	1	45 minutes	Poor	Four bad bridges	25
2			Baysah Farm	2	35 minutes	Fair		32
3	2 nd March		Neneborlornue/ Lomata	3	1 hr. 30 mins	Poor	Three bad bridges	30
4			Salala	4	46 minutes	Fair		26
5	3 rd March		Mcgill Farm	5	20 minutes	Fair		29
6	28 th Feb		Bencorma	6	1 hr. 30 minutes	Fair		31
7			Tokpaipolu	7	1 hr. 40 Minutes	Fair		25
8	3 rd March	Sanoyeh (Team based on Lutheran Campus; Totota and Gbarnga for Lenwulu Ta and Gbono Ta)	Wennie Ta	8	1 hr.	Fair		26
9	4 th March		Sanoyeh	9	1 hr. 25 minutes	Fair		26
10			Gbarmokollie	10	1hr.	Fair		30
11	5 th March		Len Wulu Ta	11	1 hr. 45 minutes	fair	Two bad bridges	30
12			Gbono Ta	12	2 hrs	Fair	Three bad bridges	26
NIMBA COUNTY²⁵								
13	7 th March	Wee-Gbehyi Mahn (Team based at Saclepea)	Garwonpa	14	1 hr	Poor	Three bad bridges	30
14			Karmenpa	16	1hr. 10 minutes	poor		30
15			Saclepea I	17	2 hrs. 30 minutes	Fair		25
16			Saclepea II	18	2 hrs. 30 minutes	Fair		25
17			Blapa /Nyeanee	15	45 minutes	Poor		
18	8 th March	Zoe –Gbao (Team based at Bahn)	Duowin	23	1 hr. 25 minutes	Fair		25
19			Zantuo	24	1 hr. 15 minutes	Poor	Two bad bridges	25
20			Behyepeo	25	1 hr. 10 minutes	Fair	Two Bad bridges	
21	9 th March	Gboe	Payee	13	1 hr. 23 minutes	Fair		25
22		Zoe -Gbao	Bahn	22	1 hr. 30 minutes	Fair		30
23	Rlekporlay		26	1 hr. 55 minutes	Poor	Two Bad bridges	30	
24	Gbormieplay		27	1 hr. 45 minutes	Poor	Three bad bridges	30	
25	11 th March	Yarpea Mahn (Team based in Sanniquella)	Duo Gorton	19	1 hr. 35 minutes	Poor	Three bad bridges	25
26			Gortonwin	21	1 hr. 30 minutes	Poor	One bad bridge	30
27	12 th March		Boaplay	20	Two Hrs. 15 minutes	Poor	Two bad bridges	30

³⁸ Either **Good** (paved); **Fair** (rough); **Poor** (bad) or **very Poor** (hardly accessible)

Annex 4. Quantitative Survey Questionnaires

LAUNCH Baseline Quantitative Survey

Questionnaire # _____

Q.1 Do you agree to participate in the interview?

Yes ... 1

No 2

[IF THE ANSWER IS 2, THEN SKIP TO QUESTION 349]

Q.2 Interview date (Month)

February .. 1

March 2

Q.3 Interview date (DAY)

day _____

Q.4 Village code

Q.5 Team code

A .. 1

B .. 2

Q.6 HH interviewer code number

1 .. 1

5 .. 5

2 .. 2

6 .. 6

3 .. 3

7 .. 7

4 .. 4

Q.7 Household ID number

1 .. 1

6 .. 6

2 .. 2

7 .. 7

3 .. 3

8 .. 8

4 .. 4

9 .. 9

5 .. 5

Q.8 Respondent's relation to the Household head

Household head 1

Grand-child 6

Spouse 2

Cousin 7

Child 3

Nephew/niece 8

Parent/grandparent 4

Aunt/uncle 9

Brother/sister (including in-laws) . 5

Other 10

Q.9 What is NAME of Household Head?

Q.10 Sex of [NAME]

Male 1

Female .. 2

Q.11 Age of [NAME] (if less than 1 year, enter 0, Don't know = 99)

..... _____

[IF THE ANSWER TO QUESTION 11 IS 0-5 OR 18-99, THEN SKIP TO QUESTION 18]

Q.12 Is [NAME] currently attending school?

Yes ... 1

No 2

[IF THE ANSWER TO QUESTION 12 IS 1, THEN SKIP TO QUESTION 14]

Q.13 If no, why not? (up to 3 responses)

Too young 1

Too expensive 5

Working at home / on farm 2

Not interested to attend 6

Cronically ill / disabled 3

Has completed secondary school 7

No school available / no teacher available 4

Other 8

[IF THE ANSWER TO QUESTION 12 IS 2, THEN SKIP TO QUESTION 15]

Q.14 Current grade level

- | | | | |
|------------------|---|-------------------|----|
| Pre-school | 1 | 7 | 8 |
| 1 | 2 | 8 | 9 |
| 2 | 3 | 9 | 10 |
| 3 | 4 | 10 | 11 |
| 4 | 5 | 11 | 12 |
| 5 | 6 | 12 | 13 |
| 6 | 7 | Post-secondary .. | 14 |

Q.15 Did [NAME] attend school last year?

- | | | | |
|---------|---|---------|---|
| Yes ... | 1 | No | 2 |
|---------|---|---------|---|

[IF THE ANSWER TO QUESTION 15 IS 1, THEN SKIP TO QUESTION 17]

Q.16 If no, why not? (up to 3 responses)

- | | | | |
|--|---|----------------------|---|
| Was too young last year | 1 | Too expensive | 5 |
| Was sick/disabled | 2 | Not interested | 6 |
| No school / teacher available last year | 3 | Other | 7 |
| Was working at home / on farm last year | 4 | | |

[IF THE ANSWER TO QUESTION 15 IS 2, THEN SKIP TO QUESTION 18]

Q.17 Grade level last year

- | | | | |
|------------------|---|-------------------|----|
| Pre-school | 1 | 7 | 8 |
| 1 | 2 | 8 | 9 |
| 2 | 3 | 9 | 10 |
| 3 | 4 | 10 | 11 |
| 4 | 5 | 11 | 12 |
| 5 | 6 | 12 | 13 |
| 6 | 7 | Post-secondary .. | 14 |

[IF THE ANSWER TO QUESTION 11 IS 0-18, THEN SKIP TO QUESTION 19]

Q.18 Highest level of education level attained

- | | | | |
|----------------------------|---|--------------------------|---|
| No formal education | 1 | Secondary - incomplete . | 5 |
| Can read/write | 2 | Completed secondary | 6 |
| Primary - incomplete | 3 | Post-secondary | 7 |
| Completed primary | 4 | | |

[IF THE ANSWER TO QUESTION 11 IS 0-14, THEN SKIP TO QUESTION 22]

Q.19 Has [NAME] received any training in farming or agricultural marketing?

- | | | | |
|---------|---|---------|---|
| Yes ... | 1 | No | 2 |
|---------|---|---------|---|

[IF THE ANSWER TO QUESTION 19 IS 2, THEN SKIP TO QUESTION 22]

Q.20 Types of training received (indicate all that apply)

- | | | | |
|---|---|-----------------------------------|---|
| Use of fertilizers (commercial/compost/mulch) | 1 | Improved harvest practices | 5 |
| Improved fertilizer application practices | 2 | Improved storage practices | 6 |
| Improved planting/transplanting practices | 3 | Improved cleaning practices | 7 |
| Improved pest/insect control practices | 4 | Other | 8 |

Q.21 Who provided training?

- | | | | |
|------------------------|---|-----------------|---|
| Government (extension) | 1 | Other NGO | 3 |
| ACDI/VOCA | 2 | Other | 4 |

Q.262 Any more household members?

- | | | | |
|---------|---|---------|---|
| Yes ... | 1 | No | 2 |
|---------|---|---------|---|

[IF THE ANSWER IS 2, THEN SKIP TO QUESTION 264]

Q.263 How many more household members

..... _____

Q.264 Have you had any refugees from Cote D'Ivoire joined your household in the last 3 years?

- | | | | |
|---------|---|---------|---|
| Yes ... | 1 | No | 2 |
|---------|---|---------|---|

[IF THE ANSWER IS 2, THEN SKIP TO QUESTION 266]

[IF THE ANSWER TO QUESTION 264 IS, THEN SKIP TO QUESTION 266]

Q.265 Number of Ivorian refugees who have joined your household

Male adult — Male child (0-17 years old) —
 Female adult — Female child (0-17 years old) .. —

Q.266 Which of the following types of foods did you or your anyone else in your household eat yesterday (during the day and in the night)

ASK ABOUT EACH FOOD TYPE

cereals 1	dairy products 4
roots/tubers 2	meat/poultry/offal 5
legumes/pulses ... 3	fish/seafood 6

Q.267 Which of the following types of foods did you or your anyone else in your household eat yesterday (during the day and in the night)

ASK ABOUT EACH FOOD TYPE

oils/fats 1	eggs 4
sugar/honey . 2	vegetables 5
fruits 3	others 6

Q.268 In the past 12 months, were there months in which you did not have enough food to meet your family's needs?

yes .. 1 no 2

[IF THE ANSWER TO QUESTION 268 IS 2, THEN SKIP TO QUESTION 270]

Q.269 If yes, which were the months (last 12 months) in which you did not have enough food to meet your family's needs?

January 1	July 7
February 2	August 8
March 3	September ... 9
April 4	October 10
May 5	November ... 11
June 6	December 12

Q.270 What is the primary source of cash income for the household?

Sales of field crops 1	Agricultural wage labour 10
Business 2	Firewood/charcoal sales 11
Mining 3	Sales of livestock/products . 12
Sale of cash crops 4	Sales of orchard products ... 13
Skilled labour 5	Handicrafts 14
Casual labour 6	Other gov't benefits 15
Petty trade 7	Begging 16
Salary/government job 8	Other 17
Remittances 9	

Q.271 What are the other sources of cash income for the household?

(Select all that apply, up to 5 responses allowed)

- | | | | |
|-----------------------------|---|---------------------------------|----|
| Sales of field crops | 1 | Agricultural wage labour | 10 |
| Business | 2 | Firewood/charcoal sales | 11 |
| Mining | 3 | Sales of livestock/products ... | 12 |
| Sale of cash crops | 4 | Sales of orchard products | 13 |
| Skilled labour | 5 | Handicrafts | 14 |
| Casual labour | 6 | Other gov't benefits | 15 |
| Petty trade | 7 | Begging | 16 |
| Salary/government job | 8 | No other sources of income .. | 17 |
| Remittances | 9 | Other | 18 |

Q.272 How has your household cash income changed over the past 3 years?

- | | | | |
|--------------------|---|-----------------|---|
| Increased | 1 | Decreased | 3 |
| Stayed the same .. | 2 | | |

[IF THE ANSWER IS 2, THEN SKIP TO QUESTION 274]

[IF THE ANSWER TO QUESTION 272 IS NOT 1, THEN SKIP TO QUESTION 274]

Q.273 What are the reasons for increased income? (READ RESPONSES ALOUD, SELECT ALL THAT APPLY)

- | | | | |
|---|---|---|---|
| New/better job | 1 | Better skills/job training | 6 |
| More wages | 2 | Increased sales from trading activities | 7 |
| More sources of household income | 3 | Increased sales of own agricultural | |
| production | 8 | Other | 9 |
| Good weathe/agricultural growing conditions | 4 | | |
| Received more remittances | 5 | | |

[IF THE ANSWER TO QUESTION 272 IS NOT 3, THEN SKIP TO QUESTION 275]

Q..274 What are the main reasons for decreased income? (READ RESPONSES ALOUD, SELECT ALL THAT APPLY)

- | | |
|--|---|
| Lost job | 1 |
| Decreased wages | 2 |
| Fewer sources of income | 3 |
| Disasters/shocks | 4 |
| Chronic illness of household member | 5 |
| Loss of remittances | 6 |
| Decreased sales from trading activities | 7 |
| Decreased sales of own agricultural/livestock production | 8 |
| Other | 9 |

Q.275 Does your family have any cash savings?

- | | | | |
|---------|---|---------|---|
| Yes ... | 1 | No | 2 |
|---------|---|---------|---|

[IF THE ANSWER TO QUESTION 275 IS 2, THEN SKIP TO QUESTION 277]

Q.276 Have your savings increased, decreased, or stayed the same over the past 3 years?

- | | | | |
|-----------------|---|--------------------|---|
| Increased | 1 | Stayed the same .. | 3 |
| Decreased | 2 | | |

Q.277 Has your household borrowed any money in the last year?

- | | | | |
|---------|---|---------|---|
| Yes ... | 1 | No | 2 |
|---------|---|---------|---|

[IF THE ANSWER TO QUESTION 277 IS 2, THEN SKIP TO QUESTION 279]

Q.278 Sources of loans (indicate all that apply)

- | | | | |
|--------------------------------|---|----------------------|---|
| Bank | 1 | Family/friends | 4 |
| Microfinance | 2 | Other | 5 |
| community savings/credit group | 3 | | |

Q.279 Household assets: Please indicate the quantity owned of each asset

(ASK ABOUT EACH TYPE OF ASSET)

- | | | | |
|------------------------|-------|-----------------|-------|
| Bed | _____ | Table | _____ |
| Radio/tape player | _____ | Coal pot | _____ |
| Mobile phone | _____ | Generator | _____ |
| Cutlass/axe | _____ | | |

Q.280 Household assets continued

(ASK ABOUT EACH TYPE OF ASSET)

Wheelbarrow	_____	Mattress	_____
Chair	_____	Cooking utensils	_____
Bucket/tub	_____	Hoe/digger	_____
Bicycle	_____		

Q.281 Is any member of your household engaged in agricultural activities?

Yes ... 1

No 2

[IF THE ANSWER IS 2, THEN SKIP TO QUESTION 306]

Q.282 Which crops did you cultivate over the last 12 months? (indicate all crops grown)

rice	1	coffee	7
cassava	2	cocoa	8
sweet potatoes/yams ...	3	banana	9
groundnuts	4	mango	10
rubber	5	papaya	11
oil plam	6	other	12

[IF THE ANSWER TO QUESTION 282 IS NOT 1, THEN SKIP TO QUESTION 287]

Q.283 How much land did you plant in rice last year? (99 = don't know)

acres

Q.284 How much rice did you produce last year? (units)

bundles	1	square tin .	5
rice bag	2	pounds	6
jute bag	3	other	7
round tin ...	4		

Q.285 How much rice did you produce last year? (number) (99 = Don't Know)

.....

Q.286 What type of rice seed did you plant? (up to 3 responses)

local	1	LAC-23	4
suakoko-8	2	Norica	5
suakoko-10 ..	3	other	6

[IF THE ANSWER TO QUESTION 282 IS NOT 2, THEN SKIP TO QUESTION 291]

Q.287 How much land did you plant in cassava last year? (99=don't know)

acres

Q.288 How much cassava did you produce last year? (units)

bundles	1	square tin .	5
rice bag	2	pounds	6
jute bag	3	other	7
round tin ...	4		

Q.289 How much cassava did you produce last year (number) (99=Don't know)

.....

Q.290 What variety of cassava did you plant last year? (up to 3 responses)

local	1	matadi	4
caricass	2	other	5
bassa girl ...	3		

Q.291 Do you use any of the following farming practices? (Ask about each item in the list)

line planting	1	ridge planting (cassava)	6
transplanting	2	solar drying	7
timely weeding	3	storage protected from rats (ratguards) .	8
compost	4	cassava grinder	9
planting in mounds (cassava)	5	rice mill	10

Q.292 How has your agricultural production changed over the past three years?

Increased 1
Stayed the same .. 2

Decreased 3

[IF THE ANSWER IS 2, THEN SKIP TO QUESTION 295]

[IF THE ANSWER TO QUESTION 292 IS NOT 1, THEN SKIP TO QUESTION 294]

Q.293 What are the reasons for increased production? (Select all that apply)

Improved/more seeds	1	Improved crop management practices ..	7
Improved/more tools	2	More labor	8
Better access to water	3	Improved roads/bridges	9
Good rains/weather	4	Access to cleared swampland	10
More area planted	5	Rehabilitation of tree crops	11
Use of fertilizer	6	Other	12

[IF THE ANSWER TO QUESTION 292 IS NOT 3, THEN SKIP TO QUESTION 295]

Q.294 What are the reasons for decreased agricultural production? (Select all that apply)

Poor quality/lack of seeds	1	Diminished soil quality	6
Poor quality/lack of tools	2	Less labor	7
Decreased access to water	3	Reduced access to markets ...	8
Poor/irregular rains/weather	4	Other	9
Less area planted	5		

Q.295 What is the MOST IMPORTANT factor that keeps you from increasing agricultural production NOW?

Lack of access to land	1
Lack of seeds	2
Lack of tools	3
Lack of credit to purchase tools	4
Not enough household labor	5
Cant hire labor / hired labor too expensive	6
Too busy in other activities	7
Not interested to increase agricultural production	8
Lack of road access to markets	9
Other	10

Q.296 What other reasons keep you from expanding agricultural production NOW? (up to 3 main reasons)

No other reasons	1
Lack of access to land	2
Lack of seeds	3
Lack of tools	4
Lack of credit to purchase tools	5
Not enough household labor	6
Cant hire labor / hired labor too expensive	7
Too busy in other activities	8
Not interested to increase agricultural production	9
Lack of road access to markets	10
Other	11

Q.297 Did you sell any agricultural production in the last season?

Yes ... 1

No 2

[IF THE ANSWER IS 2, THEN SKIP TO QUESTION 303]

Q.298 What is the estimated value of your sales of agricultural crops in the last 12 months? (Liberian Dollars)

(Don't know = 99)

Rice	_____	Cocoa	_____
Cassava/tubers	_____	Coffee	_____
Vegetables	_____	Oil palm	_____
Fruits	_____	Groundnut	_____
Rubber	_____	Other	_____

Q.299 In the last 12 months did you sell any of your crops together with other farmers in your village? (in bulk)

Yes ... 1

No 2

- Q.345 How many times did (CHILD NAME) receive polio vaccine:
 verified from card ___ reported by mother . ___
- Q.346 819 Did (CHILD NAME) receive a DPT vaccination, that is, an injection given in the thigh or buttocks, sometimes at the same time as polio drops?
 Yes - verified on vaccination card 1 don't know 4
 Yes - reported by mother 2 Not applicable 5
 No 3
- [IF THE ANSWER TO QUESTION 346 IS 2 OR 3, THEN SKIP TO QUESTION 348]
- Q.347 820 How many times?
 verified from card ___ reported by mother . ___
- Q.348 821 An injection to prevent measles after 9 months of age?
 Yes - verified on vaccination card 1 don't know 4
 Yes - reported by mother 2 Not applicable 5
 No 3
- Q.349 THIS CONCLUDES THE INTERVIEW. THANK YOU

LAUNCH Anthropometric Survey

Questionnaire # _____

Q.1 Interview date (month)

February 1

March 2

Q.2 Interview date (day of the month)

Q.3 Team code _____

A ... 1

B ... 2

C ... 3

D... 4

Q.4 HH interviewer code

1 ... 1

2 ... 2

3 ... 3

4 ... 4

5 ... 5

6 ... 6

Q.5 Household ID number

1 ... 1

2 ... 2

3 ... 3

4 ... 4

5 ... 5

6 ... 6

Q.6 Anthro team code

1 ... 1

2 ... 2

Q.7 Any children in the household age 0 - 59 months?

Yes 1

No 2

[IF THE ANSWER IS 2, THEN SKIP TO QUESTION 47]

Q.8 Birth date of child # 1

Day _____
Month _____
Year _____

Q.9 Age of child in months

Q.10 Sex of child _____

Male 1
Female 2

Q.11 Height or length of child (to 1 decimal place)
cm _____

Q.12 Was the child measured standing or prone?

Standing 1
Prone 2

Q.13 Weight of mother only (to 2 decimal places)

Q.14 Weight of mother and child (to 2 decimal places)

KG _____

Q.47 Any women in household 15-49 years old?

Yes 1
No 2

[IF THE ANSWER IS 2, THEN SKIP TO QUESTION 63]

[IF THE ANSWER IS 1, THEN REPEAT Q8 THROUGH Q47]

Q.48 MUAC measurement of woman # 1 (up to 1 decimal)

cm _____

Q.49 Any more women in household 15-49 years old?

Yes 1
NO 2

[IF THE ANSWER IS 2, THEN SKIP TO QUESTION 63]

[IF THE ANSWER IS 1, THEN REPEAT Q48 THROUGH Q49]

Q.63 THIS ENDS THE INTERVIEW. THANK YOU

Annex 5. Results from Factor Analysis on Food Security Variables

SPSS command syntax for factor analysis model:

GET

FILE='C:\Liberia ACDI-VOCA\SPSS data\BL working.sav'.

FACTOR

/VARIABLES HHsize n_incomesource v_agsales n_asset HDDS mahfp

/MISSING LISTWISE /ANALYSIS HHsize n_incomesource v_agsales n_asset

HDDS mahfp

/PRINT INITIAL EXTRACTION

/PLOT EIGEN

/CRITERIA MINEIGEN(1) ITERATE(25)

/EXTRACTION PC

/ROTATION NOROTATE

/SAVE REG(ALL)

/METHOD=CORRELATION .

RESULTS

Communalities

	Initial	Extraction
HHsize	1.000	.246
n_incomesource	1.000	.520
v_agsales	1.000	.493
n_asset	1.000	.494
HDDS	1.000	.521
mahfp	1.000	.469

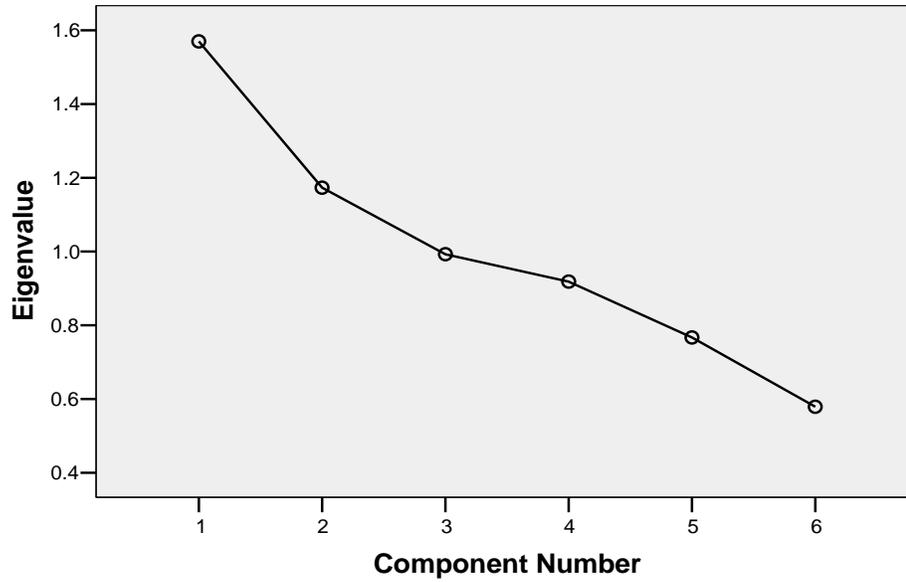
Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.570	26.165	26.165	1.570	26.165	26.165
2	1.173	19.552	45.718	1.173	19.552	45.718
3	.993	16.544	62.262			
4	.918	15.306	77.567			
5	.767	12.783	90.351			
6	.579	9.649	100.000			

Extraction Method: Principal Component Analysis.

Scree Plot



Component Matrix^a

	Component	
	1	2
HHsize	.475	.143
n_incomesource	.692	-.200
v_agsales	.230	.663
n_asset	.435	.552
HDDS	.704	-.161
mahfp	-.356	.585

Extraction Method: Principal Component Analysis.

^a 2 components extracted.

Annex 6. Qualitative Survey Team

Name	Position/Title
Tenneh Johnson	Monitoring/Evaluation Assistant (ACDI/VOCA)
Prince Toh	Research Assistant, ADEAS
Siebena Nimley	Research Assistant, ADEAS
Henry Katta	Research Assistant, ADEAS
Annita Freeman	Research Assistant, ADEAS
Ronald Mends-Cole	Research Assistant, ADEAS
Princess Coleman	Research Assistant, ADEAS
William Miller	Research Assistant, ADEAS
John Magistro	International Consultant, TANGO International

Annex 7. Work Schedule for Qualitative and Quantitative Teams

Day	County/District	Village	Theme	Team	
2.21 Mon	Monrovia	Arrival			
2.22 Tue	Monrovia	Orientation with LAUNCH. ADEAS project staff			
2.23 Wed	Bong	Travel up country to Gbarnga			
2.24 Thu	Bong	Training with ADEAS team			
2.25 Fri	Bong	Training with ADEAS team			
2.26 Sat	Bong/Salala	Gbarnga	Pretest - quantitative team	ML	
		Gbarnga	Training - qualitative team	JM	
2.27 Sun	Bong/Salala	Gbarnga	Pretest - quantitative team	ML	
		Gbao Ta	Qualitative pretest – Ag, Ag	JM	
		Kollie Ta	Qualitative pretest – Ed, Health/N	JM	
2.28 Mon	Bong/Salala	Tokpaipolu	Quantitative Survey	ML	
		Bencorma	Quantitative Survey	ML	
		Tokpaipolu	Qualitative – Ag, Ed	JM	
		Bencorma	Qualitative – Ag, Health/Nutrition	JM	
3.1 Tue	Bong/Salala	Baysah Farm	Quantitative Survey	ML	
		Malunga/Yarquala	Quantitative Survey	ML	
		Salala	Qualitative – Data entry, analysis	JM	
3.2 Wed	Bong/Salala	Neneborlornue	Quantitative Survey	ML	
		Salala	Quantitative Survey	ML	
		Neneborlornue	Qualitative – Ag, Education	JM	
		Loma Ta	Qualitative – Ag, Health/Nutrition	JM	
3.3 Thu	Bong/Salala Bong/Sanoyeh	Mcgill Farm	Quantitative Survey	ML	
		Wennie Ta	Quantitative Survey	ML	
		Salala	Qualitative – Data entry, analysis	JM	
3.4 Fri	Bong/Sanoyeh	Sanoyeh	Quantitative Survey	ML	
		Gbarmokollie	Quantitative Survey	ML	
		Sanoyeh	Qualitative – Ag, Health/Nutrition	JM	
		Gbarmokollie	Qualitative – Ag, Education	JM	
3.5 Sat	Bong/Sanoyeh	Len Wulu Ta	Quantitative Survey	ML	
		Gbono Ta	Quantitative Survey	ML	
		Gbarnga	Qualitative – Data entry, analysis	JM	
3.6 Sun	Bong-Nimba	Travel from Bong to Nimba County			
	Bong-Monrovia	Return of Quantitative Consultant to Monrovia, Depart for US			
3.7 Mon	Nimba/Wee-Gbehyi-Mahn	Garwonpa, Karmenpa	Quantitative Survey	ML	
		Saclepea I, II	Quantitative Survey	ML	
		Blapa/Nyeanee	Quantitative Survey	ML	
		Garowonpa	Qualitative – Ag, Health/Nutrition	JM	
		Saclepea	Qualitative – Ag, Education	JM	
3.8 Tue	Nimba/Zoe-Gbao	Duowin	Quantitative Survey	ML	
		Zantuo	Quantitative Survey	ML	
		Behyepeo	Quantitative Survey	ML	
		Bahn	Qualitative – Data entry, analysis	JM	
		Qualitative Key Informant Interviews			JM
3.9 Wed	Nimba/Gboe	Payee	Quantitative Survey	ML	
	Nimba/ Zoe-Gbao	Payee	Qualitative – Ag, Education	JM	

		Bahn	Qualitative – Ag, Health/Nutrition	JM
3.10 Thu	Nimba/ Zoe-Gbao	Bahn	Quantitative Survey	ML
		Rlekporlay	Quantitative Survey	ML
		Gbormieplay	Quantitative Survey	ML
		Bahn	Qualitative – Data entry, analysis	JM
		Qualitative Key Informant Interviews		JM
3.11 Fri	Nimba/Yarpea-Mahn	Duo Gorton	Quantitative Survey	ML
		Gortowin	Quantitative Survey	ML
		Gortowin	Qualitative – Ag, Health/Nutrition	JM
		Duo Gorton	Qualitative – Ag, Education	JM
3.12 Sat	Nimba/Yarpea-Mahn Bong/Sanoyeh	Boaplay	Quantitative Survey	ML
		Gbarnga	Qualitative – Team wrap up	JM
		Teams Drive from Nimba to Bong County		
3.13 Sun	Nimba – Monrovia	Travel of Teams from Nimba County to Monrovia		
	Bong/Sanoyeh	Gbarnga	Qualitative Team Leaders Rest	JM
3.14 Mon	Bong/Sanoyeh	Qualitative Key Informant Interviews		
	Monrovia	Travel of Qualitative Team from Bong to Monrovia		
3.15 Tue	Monrovia	Review, Synthesis of Field Notes, Prep for Debriefing		
3.16 Wed	Monrovia	Review, Synthesis of Field Notes, Prep for Debriefing		
3.17 Thu	Monrovia	Review, Synthesis of Field Notes, Prep for Debriefing		
3.18 Fri	Monrovia	Debriefing on Preliminary Observations to ACIDI/PCI		
3.19 Sat	Liberia-US	Departure of Qualitative Consultant		

Annex 8. Examples of Qualitative Surveys, Seasonality Calendars & FG Constraints Matrices

ACDI/VOCA LIBERIA LAUNCH Baseline Survey - Qualitative

FOCUS GROUP: VILLAGE LEADERS CONTEXTUAL SITUATION OF SAMPLED VILLAGES

1. VILLAGE

Facilitator: _____ Recorder: _____

Number of Men: _____ Number of Women: _____

1.1. Village : _____ District: _____ If town, Number of Zones _____

1.2. County: _____

1.3. Date: |__| |__| / |__| |__| / 2011
Day Month

2. VILLAGE INFRASTRUCTURE

- 2.1 Is there a daily or weekly market in this village? Daily Yes No Weekly Yes No
- 2.2 If there is no daily or weekly market, what is the distance from this village to the closest market? Miles or km _____
Hours to walk _____ Hours by vehicle _____
- 2.3 Is the principal route to the market passable year round to transport goods? Yes No
2.3.1 If not, how weeks or months each year is the route not passable? _____
- 2.4 Is there a functioning health facility in this village? Yes No
2.4.1 If yes, what type of health facility is it? _____
- 2.5 If not a hospital, how far must you go to the nearest hospital? Miles or km _____ Hours to walk _____
Hours by vehicle _____
2.5.1 Is the principal route to the hospital passable year? Yes No
- 2.6 Is there a primary school in this village? Yes No Number of schools _____ Number of Teachers _____
Number of Classrooms _____
- 2.7 Is there a secondary school in this village? Yes No Number of Teachers _____
Number of Classrooms _____
- 2.8 Is there a functioning adult literacy program in this village? Yes No
- 2.9 Is there any functioning **formal** credit program in this village? Yes No
- 2.10 Is there any program providing agricultural support or technical support to farmers in this village at this time?
Yes No
- 2.11 Is there a drug store in this village? Yes No
2.11.1 If no, how do people purchase drugs in this village?

- 2.13 How many sources of **potable** (clean drinking) water in this village ?
2.13.1 Closed pumps /____/ 2.13.2 How many are working? /____/ 2.13.1.1 Months unusable /____/
2.13.2 Traditional wells /____/ 2.13.2.1 Months unusable /____/

2.14 Do most of you own or rent land for farming in this village? _____

3. DEMOGRAPHICS

3.1 What is the estimated population of the village? _____

3.2 What is the estimated ethnic composition of the village? _____% _____% _____%

3.3 Are there refugees or Internally Displace People (IDPs) in this village? Yes No

3.3.1 If so, approximately how many refugees/IDPs are there, and when did they arrive? _____

3.4 What is the religious composition of the village? Estimated % of Christians _____ Estimated % of Muslims _____

_____ Estimated % of other _____ (specify religious group, eg, Bahai, other)

4. DISASTERS

4.1 Please identify any disasters that have occurred community-wide in the last ten years (this may require prompting, such as war/conflict, droughts, floods, pest infestations, etc.). What was their impact? What was the external response, if any (govt, NGO, other)? What was the effect of the response (effective, ineffective, other)?

Type of Disaster/Year	Impact on Community	External Response	Effect of Response

4.2 Who in the community is most vulnerable (at risk of loss of life or assets due to loss of food, disease epidemic, other natural or man made disasters)? (eg, female-headed; absentee head of household [husband or wife is absent]; elderly-headed; landless; children, mothers, handicapped, ethnic or religious groups, other)

4.2.1 Why are these households more vulnerable?

4.3 In the case of food shortage, what is the order of feeding the family (who is first, second, third, etc)?

4.4 In your opinion, what percentage of the village would fit under the category of highly vulnerable households mentioned above?

% _____

4.5 Has food aid/distribution occurred in this county in the last 5 years for any reason? Yes No

4.5.1 If yes, for what reason? What was the effect of the food distribution?: (if they do not mention any **malnutrition or school feeding programs**, then prompt to ensure that this hasn't occurred in this village).

Month/Year	Target group for Food	Method of Food	Effect of the Distribution

	Distribution	Distribution	

4.6 Does your community have an organized committee or group for disaster preparedness planning (planning for natural disasters, war/conflict, disease outbreaks, other)? Yes No

4.6.1. If yes, please describe the activities of the group and who/when it was organized

4.7 Have you ever put the disaster response plan into action? Yes No

4.7.1 If yes, what was the disaster event, when was it implemented, and how effective was the response plan?

4.9 If an extreme food shortage has occurred due to disaster, what has been the most effective way of distributing food?

5. INTRA-HOUSEHOLD DECISION MAKING ON FOOD SECURITY

5.1 Who makes the decisions within the household with regard to achieving food security or responding to problems of attaining food security?

5.2 Who makes specific decisions on managing the family income?

6. COMMUNITY HEALTH MOBILIZATION

6.1 Do any local community health care groups exist for training of local health practitioners or community health volunteers? If so, when and how were they established?

6.2 Have any donor-funded programs (government, NGOs, etc.) been introduced that use a **health care group approach** in training local health practitioners or community health volunteers? If so, when and how were they established?

6.3 If any community health care groups exist, how effective have they been to date in training local health care practitioners, and what resources are needed to improve the health care training of such groups?

7. IMPROVED EDUCATIONAL OPPORTUNITIES

7.1 Do you believe there is a need for skills training of youth to become agro-entrepreneurs, or small business farmers? If so, what specific skills training is needed?

7.2 How can primary schools better educate youth to develop practical skills in becoming entrepreneurs and small businesses in agriculture?

7.3 Does your community have a Parent Teachers Association? How can the PTA be better trained to support the local development needs of youth in the community?

Seasonal Calendar

Village _____ **County** _____

Date _____

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Rainy season												
Farming season												
Rice (upland)												
Rice (swamp bottomland)												
Cassava (upland with rice)												
Vegetables												
Seasonality of food production												
Rice												
Cassava												
Potatoes												
Sugar Cane												
Pepper												
Yams												
Eddoe												
Palm Oil												
Plantains												
Corn												
Vegetables (okra, cabbage, onions, kalic, tomato, onions, carrots, beans, eggplant, butterpea)												
Fruits (banana, plum, breadfruit, other)												
Seasonality of food availability												
Hunger season												
Rice												
Cassava												
Vegetables												
Seasonality of women's work												
Agricultural production (rice, cassava, vegetables)												
Non-agricultural tasks (domestic, other – list here)												
Seasonality of men's work												
Agricultural production (rice, cassava, vegetables)												
Non-agricultural tasks (domestic, other – list)												

Seasonality of cash flow and credit availability												
Crop harvest and sales												
Repayment of loans and debt level												

ACDI/VOCA LIBERIA
LAUNCH
FG Constraints Analysis Matrices

PROGRAM GOALS: Improved Food Security of Vulnerable Groups in Bong and Nimba Counties	
SO1: Increased Availability of and Access to Food Among Vulnerable Rural Populations	
IR 1.1 Improved Smallholder Production	
Sub-IR 1.1.1: Improved Farm Management Practices	
Constraints to Women's Crop Production	<p>Cultural</p> <ul style="list-style-type: none"> • Land tenure status • Marriage status • Gender relations with men • Ethnicity • Religion • Socio-economic status • Other <p>Financial</p> <ul style="list-style-type: none"> • Access to credit or cash for crop production • Levels of debt • Other <p>Information/Knowledge</p> <ul style="list-style-type: none"> • Improved farming methods (planting, weeding, hoeing, harvesting, pest management, grading/sorting, post-harvest storage) • Farm management skills (business management, bookkeeping) <p>Institutional/Organizational</p> <ul style="list-style-type: none"> • Govt policy on land, water, natural resource management • Govt policy on inputs (seeds, fertilizer, technology costs) • Govt policy on crop prices (subsidies, taxes) • Presence/absence of local community organizations (coops, associations, etc.) <p>Physical</p> <ul style="list-style-type: none"> • Lack of farm tools, implements • Lack of inputs (seed, fertilizer, technology) • Poor crop storage technology <p>Natural/Environmental</p> <ul style="list-style-type: none"> • Quality of land/soil • Water availability/access • Field size • Climate change/variability (changes in wet and dry periods)
Constraints to Men's Crop Production	<p>Cultural</p> <ul style="list-style-type: none"> • Land tenure status • Marriage status • Gender relations with women • Ethnicity • Religion • Socio-economic status • Other <p>Financial</p> <ul style="list-style-type: none"> • Access to credit or cash for crop production • Levels of debt

	<ul style="list-style-type: none"> • Other
	Information/Knowledge <ul style="list-style-type: none"> • Improved farming methods (planting, weeding, hoeing, harvesting, pest management, grading/sorting, post-harvest storage) • Farm management skills (business management, bookkeeping)
	Institutional/Organizational <ul style="list-style-type: none"> • Govt policy on land, water, natural resource management • Govt policy on inputs (seeds, fertilizer, technology costs) • Govt policy on crop prices (subsidies, taxes) • Presence/absence of local community organizations (coops, associations, etc.)
	Physical <ul style="list-style-type: none"> • Lack of farm tools, implements • Lack of inputs (seed, fertilizer, technology) • Poor crop storage technology
	Natural/Environmental <ul style="list-style-type: none"> • Quality of land/soil • Water availability/access • Field size • Climate change/variability (changes in wet and dry periods)
IR 1.2: Increased Rural Household Livelihood Opportunities	
Sub-IR 1.2.1: Improved Market Linkages	
Sub-IR 1.2.2: Improved Smallholder Access to Financial Resources	
Constraints to Women's Livelihood Opportunities	Cultural <ul style="list-style-type: none"> • Land tenure status • Marriage status • Gender relations with women • Ethnicity • Religion • Socio-economic status • Food preferences/taboo • Other
	Financial <ul style="list-style-type: none"> • Access to credit or cash for livelihood activities • Levels of debt • Other
	Informational/Knowledge <ul style="list-style-type: none"> • Local knowledge of livelihood activities (e.g., poultry/small livestock production, micro-enterprise development (dry goods), other IGA) • Availability/access to information on livelihood opportunities (e.g., poultry/small livestock production, micro-enterprise development (dry goods), other IGA)
	Institutional/Organizational <ul style="list-style-type: none"> • Govt policy (taxes, other fees) on poultry, small livestock, micro-enterprise development (e.g., dry goods), other IGA • Presence/absence of community organizations (coops, associations, etc.) for micro-enterprise development, IGA, etc.
	Physical <ul style="list-style-type: none"> • Availability/access to physical resources necessary for livelihoods activities (animal feed, veterinary care, vaccines, medicines) • Availability/access to physical structures to set up micro-enterprises,

	<p>other IGA</p> <p>Natural/Environmental</p> <ul style="list-style-type: none"> • Quality of land/soil, water availability, animal fodder • Climate change/variability (too wet or dry for small livestock production, disease caused by changes in climate/weather)
Constraints to Men's Livelihood Opportunities	<p>Cultural</p> <ul style="list-style-type: none"> • Land tenure status • Marriage status • Gender relations with women • Ethnicity • Religion • Socio-economic status • Food preferences/taboo • Other
	<p>Financial</p> <ul style="list-style-type: none"> • Access to credit or cash for livelihood activities • Levels of debt • Other
	<p>Informational/Knowledge</p> <ul style="list-style-type: none"> • Local knowledge of livelihood activities (e.g., poultry/small livestock production, micro-enterprise development (dry goods), other IGA • Availability/access to information on livelihood opportunities (e.g., poultry/small livestock production, micro-enterprise development (dry goods), other IGA
	<p>Institutional/Organizational</p> <ul style="list-style-type: none"> • Govt policy (taxes, other fees) on poultry, small livestock, micro-enterprise development (e.g., dry goods), other IGA • Presence/absence of community organizations (coops, associations, etc.) for micro-enterprise development, IGA, etc.
	<p>Physical</p> <ul style="list-style-type: none"> • Availability/access to physical resources necessary for livelihoods activities (animal feed, veterinary care, vaccines, medicines) • Availability/access to physical structures to set up micro-enterprises, other IGA
	<p>Natural/Environmental</p> <ul style="list-style-type: none"> • Quality of land/soil, water availability, animal fodder • Climate change/variability (too wet or dry for small livestock production, disease caused by changes in climate/weather)
Constraints to Women's Market Access	<p>Cultural</p> <ul style="list-style-type: none"> • Marriage status • Gender relations with men • Ethnicity • Religion • Socio-economic status • Other
	<p>Financial</p> <ul style="list-style-type: none"> • Access to credit or cash for marketing of crops • Levels of debt • Other
	<p>Information/Knowledge</p> <ul style="list-style-type: none"> • Marketing skills (ability to sell, negotiate price)

	<ul style="list-style-type: none"> • Access to market price information (radio, other sources)
	<p>Institutional/Organizational</p> <ul style="list-style-type: none"> • Govt policy on buying/selling (taxes, other fees) • Govt policy on transport • Govt policy on market fees, crop registration/certification • Presence/absence of community organizations (coops, associations, etc.)
	<p>Physical</p> <ul style="list-style-type: none"> • Access to feeder roads/markets • Transport • Bulking of crops • Frequency of market (monthly, weekly)
	<p>Natural/Environmental</p> <ul style="list-style-type: none"> • Quality of land/soil fertility • Water availability/access • Size of field plot for farming • Climate change (changes in length of wet and dry periods, severity or intensity of droughts, floods)
Constraints to Men's Market Access	<p>Cultural</p> <ul style="list-style-type: none"> • Marriage status • Gender relations with men • Ethnicity • Religion • Socio-economic status • Other
	<p>Financial</p> <ul style="list-style-type: none"> • Access to credit or cash for marketing of crops • Levels of debt • Other
	<p>Information/Knowledge</p> <ul style="list-style-type: none"> • Marketing skills (ability to sell, negotiate price) • Access to market price information (radio, other sources)
	<p>Institutional/Organizational</p> <ul style="list-style-type: none"> • Govt policy on buying/selling (taxes, other fees) • Govt policy on transport • Govt policy on market fees, crop registration/certification • Presence/absence of community organizations (coops, associations, etc.)
	<p>Physical</p> <ul style="list-style-type: none"> • Access to feeder roads/markets • Transport • Bulking of crops • Frequency of market (monthly, weekly)
	<p>Natural/Environmental</p> <ul style="list-style-type: none"> • Quality of land/soil fertility • Water availability/access • Size of field plot for farming • Climate change (changes in length of wet and dry periods, severity or intensity of droughts, floods)

SO2: Reduced Chronic Malnutrition of Vulnerable Women and Children Under 5	
IR 2.1: Improved Nutrition, Feeding and Care Practices among PLWs and Children under 2 (pregnant women; breastfeeding (0-6 mos); complementary feeding (6-24 mos))	
Constraints to Women's and Children's Health	Cultural <ul style="list-style-type: none"> • Beliefs, attitudes, nutritional practices of PLW regarding maternal and infant health/nutrition • Beliefs, attitude, nutritional practices of PLW regarding breastfeeding (0-6 mos) • Beliefs, attitude, nutritional practices of PLW regarding complementary feeding (6-24 mos) • Role of age, marriage status, gender relations, ethnicity, religion, socio-economic status, food taboos among PLW and influence on maternal and infant health/nutrition
	Financial <ul style="list-style-type: none"> • Access to credit or cash, debt level among PLW
	Information/Knowledge <ul style="list-style-type: none"> • Access to health/nutrition information, local knowledge of nutrition, breastfeeding, hygiene practices (hand washing), water storage and contamination among PLW
	Institutional/Organizational <ul style="list-style-type: none"> • Govt policy (subsidies) on breastfeeding, use of infant formula/bottled milk • Presence/absence of local community organizations (coops, associations) for maternal and infant health
	Physical <ul style="list-style-type: none"> • Access to nutritional supplements, medications for PLW • Access to equipment for food processing (infant meal, porridge) • Access to potable water, water storage, filters
	Natural/Environmental <ul style="list-style-type: none"> • Water quality and sources (rivers, ponds, wells) • Climate extremes (droughts, floods) that affect water supply and disease transmission (malaria, meningitis, cholera, etc.) • Rainfall, flooding conditions (destruction of roads, clinics)
IR 2.2: Improved Prevention and Treatment of Maternal and Child Illnesses	
Sub-IR 2.2.1: Strengthened Clinic Response to Community Health Needs	
Sub-IR 2.2.2: Improved Community Mobilization for Health	
Sub-IR 2.2.3: Improved Water and Sanitation Practices	
Constraints to Improved Community Health Mobilization and WATSAN	Cultural <ul style="list-style-type: none"> • Beliefs/attitudes (fear, lack of trust) about inoculations, vaccines, modern medicine, govt health care workers • Beliefs/attitudes about hand washing, use of toilets/latrines • Beliefs/attitudes about contraception and sexual practices, HIV/AIDS and STDs
	Financial <ul style="list-style-type: none"> • Access/availability of credit or cash for medical treatment, use of health care facilities • Access to credit or cash for WATSAN facilities (toilets, latrines, potable water, water storage, filters, etc)
	Information/Knowledge <ul style="list-style-type: none"> • Access to health/nutrition information

	<ul style="list-style-type: none"> Local knowledge of illness, disease transmission and treatment Local knowledge of hygiene, WATSAN practices
	<p>Institutional/Organizational</p> <ul style="list-style-type: none"> Govt policy (taxes, fees) on health care access and treatment Govt policy on WATSAN (toilets, latrines, potable water, hygiene, etc) Presence/absence of local community organizations (coops, associations) for local health care, WATSAN
	<p>Physical</p> <ul style="list-style-type: none"> Absence or lack of clinics, health care workers Absence of roads to clinics Absence of potable water, water storage/filters, toilets/latrines, electricity, phone/internet communications
	<p>Natural/Environmental</p> <ul style="list-style-type: none"> Water quality and sources (rivers, ponds, wells) Climate extremes (droughts, floods) that affect water supply and disease transmission (malaria, meningitis, cholera, etc.) Rainfall, flooding conditions (destruction of roads, clinics)
Constraints to Improved Community Health Mobilization and WATSAN	<p>Cultural</p> <ul style="list-style-type: none"> Beliefs/attitudes (fear, lack of trust) about inoculations, vaccines, modern medicine, govt health care workers Beliefs/attitudes about hand washing, use of toilets/latrines Beliefs/attitudes about contraception and sexual practices, HIV/AIDS and STDs
	<p>Financial</p> <ul style="list-style-type: none"> Access/availability of credit or cash for medical treatment, use of health care facilities Access to credit or cash for WATSAN facilities (toilets, latrines, potable water, water storage, filters, etc)
	<p>Information/Knowledge</p> <ul style="list-style-type: none"> Access to health/nutrition information Local knowledge of illness, disease transmission and treatment Local knowledge of hygiene, WATSAN practices
	<p>Institutional/Organizational</p> <ul style="list-style-type: none"> Govt policy (taxes, fees) on health care access and treatment Govt policy on WATSAN (toilets, latrines, potable water, hygiene, etc) Presence/absence of local community organizations (coops, associations) for local health care, WATSAN
	<p>Physical</p> <ul style="list-style-type: none"> Absence or lack of clinics, health care workers Absence of roads to clinics Absence of potable water, water storage/filters, toilets/latrines, electricity, phone/internet communications
	<p>Natural/Environmental</p> <ul style="list-style-type: none"> Water quality and sources (rivers, ponds, wells) Climate extremes (droughts, floods) that affect water supply and disease transmission (malaria, meningitis, cholera, etc.) Rainfall, flooding conditions (destruction of roads, clinics)
SO3: Improved Educational Opportunities for Children and Youth	
IR 3.1 Improved Quality of Primary School and Livelihoods-based Education for Youth	
Girls' Constraints to School Attendance	<p>Cultural</p> <ul style="list-style-type: none"> Beliefs, attitudes among parents on <i>access</i> to govt, community, private

	<p>schools for girls</p> <ul style="list-style-type: none"> • Beliefs, attitudes among parents on the <i>quality</i> of education in schools (e.g., sanitation facilities vis a vis menstruation among pubescent girls (i.e., presence/absence of latrines in schools) • Age, gender roles, ethnicity, religion, socio-economic status, taboos (e.g., pregnancy, HIV/AIDS) for girls in accessing schools
	<p>Financial</p> <ul style="list-style-type: none"> • Access to funds, credit for education, school uniforms, books, etc. for girls in govt, community, private schools
	<p>Information/Knowledge</p> <ul style="list-style-type: none"> • Lack of knowledge, information, awareness of educational and vocational options/choices for girls • Parents level of education and influence on sending girls to school
	<p>Institutional/Organizational</p> <ul style="list-style-type: none"> • Policy (tuition, fees) on education, vocational training for girls (govt, community, private schools) • Teachers/administrators charging fees for school attendance for girls • Attendance rates, retention rates, teacher/student rations; matriculation rates for girls • Presence/absence of local community organization (PTA) for school/vocational training
	<p>Physical</p> <ul style="list-style-type: none"> • Absence or lack of schools, teachers, vocational centers, training facilities for girls • Poor roads, distance to school, transport (e.g., on foot, bicycle) for girls
	<p>Natural/Environmental</p> <ul style="list-style-type: none"> • Climate extremes (e.g., droughts, floods) that destroy schools, roads, vocational training facilities for girls • Shortages of water, firewood that require girls to stay home and work
Boys' Constraints to School Attendance	<p>Cultural</p> <ul style="list-style-type: none"> • Beliefs, attitudes among parents on <i>access</i> to govt, community, private schools for boys • Beliefs, attitudes among parents on the <i>quality</i> of education in schools • Age, gender roles, ethnicity, religion, socio-economic status, taboos (e.g., pregnancy, HIV/AIDS) for boys in accessing schools
	<p>Financial</p> <ul style="list-style-type: none"> • Access to funds, credit for education, school uniforms, books, etc. for boys in govt, community, private schools
	<p>Information/Knowledge</p> <ul style="list-style-type: none"> • Lack of knowledge, information, awareness of educational and vocational options/choices for boys • Parents level of education and influence on sending boys to school
	<p>Institutional/Organizational</p> <ul style="list-style-type: none"> • Policy (tuition, fees) on education, vocational training for boys (govt, community, private schools) • Teachers/administrators charging fees for school attendance for boys • Attendance rates, retention rates, teacher/student rations; matriculation rates for boys • Presence/absence of local community organization (PTA) for school/vocational training
	<p>Physical</p>

	<ul style="list-style-type: none"> • Absence or lack of schools, teachers, vocational centers, training facilities for boys • Poor roads, distance to school, transport (e.g., on foot, bicycle) for boys
	<p>Natural/Environmental</p> <ul style="list-style-type: none"> • Climate extremes (e.g., droughts, floods) that destroy schools, roads, vocational training facilities for boys • Shortages of water, firewood that require boys to stay home and work
IR 3.2 Improved Management of Schools/Education Programs	
Teacher/Administrator Constraints to Educational Management	<p>Cultural</p> <ul style="list-style-type: none"> • Community beliefs, attitudes toward teachers/administrators that constrain improved school management • Perceptions of administrators and their level of professional training • Age, gender, ethnicity, religion, socio-economic status and political divisions/tensions (e.g., rival political parties) that hinder improved school management
	<p>Financial</p> <ul style="list-style-type: none"> • Adequate financial support/funds for school management
	<p>Information/Knowledge</p> <ul style="list-style-type: none"> • Access to and lack of knowledge, information for improved educational management
	<p>Institutional/Organizational</p> <ul style="list-style-type: none"> • Govt policy (e.g., teacher/administrative training, transfer, promotion, in-service training) on educational management • Govt policy on marital status of teachers/admin • Support of local community organizations (e.g., PTA) for educational management
	<p>Physical</p> <ul style="list-style-type: none"> • Absence or lack of physical facilities for training or meeting of teachers, administrators, community educational groups (e.g., PTA) • Distance, bad roads, lack of transport/housing/WATSAN needed for teachers/admin, community groups to travel to hold meetings on school management
	<p>Natural/Environmental</p> <ul style="list-style-type: none"> • Climate extremes (droughts, floods) that destroy schools, roads, vocational facilities

Annex 9. List of Key Informants Interviewed

Name	Position/title
Ahamadou Ndiade	Chief of Party (ACDI/VOCA)
George Forpoh	Monitoring & Evaluation Director (ACDI/VOCA)
Tenneh Johnson	Monitoring/Evaluation Assistant (ACDI/VOCA)
Gabriel Coleman	County Coordinator (ACDI/VOCA)
Philip Zoryu	County Coordinator (ACDI/VOCA)
Deanne Samuels	Senior Technical Officer for Research, M&E (PCI)
Frederick Henning	Country Representative (PCI)
John Sando	Monitoring & Evaluation (PCI)
Samuel Kehleag	County Agriculture Coordinator, Nimba County
Ben Kisaye	District Agriculture Officer, Saclepea-Mah District, Nimba County
Joe Bunadin-Kulah	District Education Officer, Saclepea-Mah District, Nimba County
Anderson S.G. Yeehea	Supervising Principal, Saclepea-Mah District, Nimba County
Dormas Gbonlay	District Secretary, Saclepea-Mah District, Nimba County
Lee Dalm	District Statistician, Saclepea-Mah District, Nimba County
Younan Duogbay	Environmental Health Technician Surveillance Officer, Saclepea-Mah District, Nimba County
Patrick P. Treka	Physician Assistant, Bahn, Zoe-Gbao District, Nimba County
Rancy W. Leesala	Child Health Survival Administrator, Bahn, Zoe-Gbao District, Nimba County
Ernest S. Dianyee	Child Survival Focus Person, Bahn, Zoe-Gbao District, Nimba County
Harris G. Dahn	District Health Officer, Bahn, Zoe-Gbao District, Nimba County
P. Pleyelekay Gbaintor	Environmental Health Technician, Bahn, Zoe-Gbao District, Nimba County
Thomas Karngebea	District Education Officer, Bahn, Zoe-Gbao District, Nimba County
Tarpeh J. Wah	Statistician, DEO, Bahn, Zoe-Gbao District, Nimba County
Moses Dermie	Secretary, DEO, Bahn, Zoe-Gbao District, Nimba County
George K. Matiah	District Agriculture Officer, Sanniquelle District, Nimba County
Harry S.D. Lami	Project Manager, Gbedin Rice Project
Joseph T. Ballah	Assistant Director, LISGIS, Nimba County
Tony B. Fahn	Database Manager, LISGIS, Nimba County
Bories B. Barlea	Head of Logistics and Personnel, CEO, Nimba County School System
Avery L. Nawah	Statistician, CEO, Nimba County School System
Katherine Peters	Health and Nutrition Consultant, G. W. Harley Hospital, Sanniquellie, Nimba County
Dr. Cuallau Jabbeh	Physician, G. W. Harley Hospital, Sanniquellie City, Nimba County
Emmanuel K. Dahn	District Education Officer, Sanniquellie City, Nimba County
Henry Kleeme	Bong County Agriculture Commissioner/Communal Farming, Ministry of Internal Affairs
Alfred P. Jarwoe	District Health Officer, Jorquelle District, Bong County
Peter S. Tiah	Clinical Supervisor, Bong County Health Team, Ministry of Health
Monica K. Honore	Country Agriculture Coordinator, Bong County

Annex 10. Qualitative Field Instruments

Qualitative Tools	Bong County	Nimba County	Other	Total
Focus Group Discussions				
SO 1 - Women's Agriculture and Livelihoods	4	3		7
SO 1 - Men's Agriculture and Livelihoods	4	3		7
SO2 - Health and Nutrition – PLW, Clinic Administrators	4	3		7
SO3 - Education – Parents of School Children	4	3		7
SO3 – Education - School Administrators, Instructors	4	3		7
Subtotal	20	15		35
Semi-Structured Interviews with Village Leaders				
	4	4		8
Subtotal	4	4		8
Seasonality Calendars				
	2	2		4
Subtotal	2	2		4
Key Informant Interviews				
Agriculture	2	4		6
Health	2	4		6
Education	1	4		5
Subtotal	5	12		17
Project Staff (ACDI/VOCA, PCI)			2	2
Subtotal			2	2
Total	31	33	2	66

Annex 11. Coefficients used in Asset Index

Type of Asset	Weight in Index
Household Assets	
Bed	30
Radio	30
Phone	50
Cutlass	10
Table	10
Coalpot	10
Generator	300
Wheelbarrow	30
Chair	5
Bucket	5
Bicycle	100
Motorcycle	800
Mattress	5
Cooking pot	5
Hoe	10
Livestock	
Cattle	200
Goats	30
Sheep	30
Chickens/ducks/guinea fowl	5
Pigs	50

Annex 12. Semi-Structured Interviews with Village Leaders – Data Summary

	Bong				Nimba				Total	Avg
	Tokpaiolu	Salala	Loma Ta	Sanoyeh	Payee	Gorton	Bahn	Gortowin		
FG participants	15 M	9M, 3 W	10 M, 2 W	10 M, 5 W	18 M, 3 W	7M, 6W	8 M	-	77M, 19W	
Estimated population size	1,123	6,000	327	2,500	2,336	2,750	13,000	1,500	29,536	
Impassible route to market (months)	3	0	6	4	5	5	3	4		3.75
Health facility status (NA = not available, C = clinic, H= hospital)	C	C	NA	C	NA	NA	C	NA	4C, 4NA	
Distance to health facility (hours to walk)	6	0	-	0	-	1	-	3		2
Primary or secondary School (P=primary, S=secondary)	P	P, S	P	P	P	P	P,S	P	8P, 2S	
Distance to secondary school (miles)	-	0	-	25	-	-	-	-		12.5
Adult literacy program	Y	N	Y	Y	N	N	N	N		
Daily market	N	Y	N	N	Y	Y	Y	N		
Weekly market	Y	Y	Y	Y	N	N	Y	N		
Distance to weekly market (hours to walk)	0	0	1.75	0	1.25	4	2-3	5		1.8
Form micro-credit program	N	N	N	N	Y	N	Y	N	6N, 2Y	
Agricultural training/support at present	N	N	N	Y	Y	N	N	N	6N, 2Y	
Village pharmacy	N	Y	N	Y	N	N	Y	N	6N, 2Y	
Potable water – functioning pumps	Y (1)	N	N	Y (1)	Y (4)	Y (2)	Y (6)	N (streams)	5Y, 3N	
Traditional wells	Y	Y	Y	-	-	Y	-	N	4Y, 1N	
Land tenure status (majority)	Rent	Rent	Own	Rent	Own	Own	Own	Own	3R, 5O	
Disaster events	War 1996 Cholera 1995	War 1990	Storm 2001	Land Dispute 2008	Caseworm 2010, Storm 2010	None	Caseworm 2006 – present	Diarrhea 2003		
Most vulnerable	Women, Children, Families w/ no Labor	Children, Blind, Crippled, Widows	Crippled, Elderly, Widows	Widows, Elderly	Disable, Widows, Elderly w/out Land or Children	Blind, Crippled, Elderly w/out Children	Children, Widows, Elderly	Children, Mothers, Elderly, Widows		
Food distribution in last 5 yrs	N	N	N	Y	N	Y	Y	N	5N, 3Y	
Disaster risk management plans	N	N	N	Y	N	N	N	N	7N, 1Y	
Government, NGO project history	WFP lunch	-	CRS adult literacy, CONCERN pumps, latrines	LDS 2002, WFP lunch 2008, WFP FFW seed rice 2010	EU FFW, ACDI/VOCA WFP lunch	WFP lunch	UNHCR, NRC, ICRC current IC refugee crisis 2011, ARS, IRC, ACDI/VOCA STCP	-		
Health care training	-	-	Africare, Mentor 2004	MoH, SC 2009	Equip Liberia	-	Equip Liberia	-		

Annex 13. List of Documents Reviewed

- ACDI/VOCA *USAID Title II Multi-Year Assistance Program. Liberian Agricultural Upgrading, Nutrition and Child Health (LAUNCH)*. Proposal submission to USAID, January 15, 2010.
- ACDI/VOCA *Liberian Agricultural Upgrading, Nutrition and Child Health MYAP. Terms of Reference Baseline Study Plan*. 2011.
- LISGIS *Republic of Liberia 2008 Population and Housing Census Highlights*.
- Republic of Liberia *Nimba County Schools System. Saclepea-Mah Education District – I. Private Schools Listing for Academic 2010/2011*. Ministry of Education
- Republic of Liberia *Nimba County Schools System. Saclepea-Mah Education District – I. Public/Community Schools Statistical Report for Academic 2010/2011*. Ministry of Education
- Republic of Liberia *2008 National Population and Housing Census Final Results*. Liberian Institute of Statistics and Geo-Information Services (LISGIS), May 2009.
- Republic of Liberia *The State of Food and Nutrition Security in Liberia. Comprehensive Food Security and Nutrition Survey 2010*. October 2010.
- Republic of Liberia *Bong County Development Agenda, 2008-2012*.
- Republic of Liberia *Nimba County Development Agenda 2008-2012*.
- Sutter, Phil and Kristen Cashin. *USAID Office of Food for Peace Liberia Food Security Country Framework FY 2010 – FY 2014*. Washington, D.C.: Food and Nutrition Technical Assistance II Project (FANTA-2), Academy for Educational Development (AED), 2009.
- UNDP Summary, Human Development Report 2009. Overcoming barriers: Human mobility and development*.

Annex 13. Baseline Survey Plan

**Baseline Survey Plan
LAUNCH Title II MYAP
Prepared for ACDI/VOCA in Liberia
By TANGO International**

February, 2011

Introduction

The overall aim of the Baseline Study is to establish baseline values of the indicators identified in IPTT, including the impact and outcome indicators, and to understand the prevailing conditions of the households in LAUNCH target areas. The baseline study has the following objectives:

5. To establish the baseline values for the impact and outcome (intermediate results) indicators identified in the LAUNCH IPTT. Additional indicators may be added to the baseline if the project has already identified project specific outcome level indicators (to capture behavioral or systemic changes) that are not included in IPTT. The baseline values will be used to assess progress, and results at impact, and outcomes.
6. To establish food insecurity and socio-economic status of the target households. It is recommended to collect information on at least three proxy measures of food insecurity, coping strategy index, and income and expenditure of the households.
7. Using quantitative data and qualitative information gain an in-depth understanding of the causes of food insecurity in the target areas.
8. Define vulnerability, identify response patterns to shocks and disasters and provide information for the trigger indicators identified

Objective of survey

The baseline study aims, through a quantitative survey of a representative sample of households in the program impact area, to provide quantitative data vital to determinations about the program's start-up status. The purpose of the baseline survey is to estimate and analyze key outcome and impact indicators status, including those found in the Indicator Performance Tracking Table (IPTT). This information will be used for setting short and long term targets for tracking progress of the program. Findings may also be used for refining and/or prioritizing program activities in the intervention area. The baseline survey is designed to be comparable with the final survey.

The baseline study is designed to address a number of key questions relevant for evaluation of the LAUNCH program. These questions are presented below:

Agriculture

- What agricultural use, production, post-harvest factors have contributed to food insecurity?
- What are the major constraints to improved crop production, reduced losses among the population?
- What percentage have received previous farmer training on improved methods? Why weren't the practices adopted?
- What percentage of the population currently use improved agricultural/technological practices that enhances food security?
- What factors contribute to reduced market access?
- What percentages grow a wide variety of crops; grow crops for cash, rear livestock?
- What methodologies would best ensure sustainability of improved farming methods?

Nutrition and health/hygiene

- What specific cultural issues affect feeding practices and beliefs about nutrition?
- What food use practices among women and children lead to malnourishment?
- What other factors contribute to malnourishment – food inadequacy, lack of knowledge, food distribution practices in the household?
- What is the current level of underweight and stunting of under 5 children (disaggregated by sex) in the population?
- What barriers are there to exclusive breastfeeding for the first six months of a child's life?
- What barriers are there to improved nutrition practices?
- What hygiene practices contribute to illness and malnourishment in the sample?
- What percentage of households has access to and use clean water from protected wells?

- What percentage has access to and uses latrines?
- What is the capacity of local existing organizations to engage in building wells, latrines?
- Have caregivers received previous hygiene education – what barriers are there to change?

Gender

- How will gender relations affect the achievement of sustainable results?
- How will the proposed results affect the relative status of men and women?

Risk reduction

- Who are the most vulnerable and why?
- What are the key factors influencing food insecurity?
- What factors do respondents think are the main causes for food insecurity?
- What do respondents consider the best way to distribute food aid so as not to increase dependency?
- What strategies are used by caregivers/households to cope with food insecurity at the household level?

Using quantitative and qualitative methods of data collection, TANGO will strive to address these questions. To this end, TANGO proposes two consultants to facilitate and oversee the quantitative and qualitative data collection for the LAUNCH baseline study.

Specifically, TANGO will support ACDI/VOCA and their partners by designing the sampling strategy and survey instruments (both quantitative and qualitative) working closely with all stakeholders to ensure all information needs are met. Additionally, TANGO will provide training to enumerators and qualitative facilitators, as well as ensure that appropriate quality assurance mechanisms are in place including standardized survey protocol as well as direct field supervision. Following data collection, TANGO will compile and analyze quantitative and qualitative data, synthesize survey findings and compute baseline project indicators in a reviewed and finalized baseline survey report.

In addition to providing the baseline values of program indicators, the baseline survey will also provide the baseline benchmarks to assess a number of evaluation questions, to be addressed later in the life of the program. At the time of the baseline, the program impact and outcome indicators, as well as information about household practices and knowledge will be broken down along the following dimensions:

- Differences in program indicators across districts
- Differences in program indicators by gender of household head
- Differences in program indicators by economic status of household

The overall evaluation design of the program, including both the baseline and the final surveys, will also address the following evaluation questions:

- Which types of program intervention have been most widely adopted – both by program participants and non-participants?
- What have been changes in key areas of knowledge/awareness among the population in the program intervention areas, comparing participants with non-participants?
- What have been changes in key activities/behaviors among the population in program intervention areas, comparing participants with non-participants?
- Using multivariate analysis, which of the following factors explain changes in program impact-level indicators over time: district (to account for geographic exogenous factors), knowledge, practices, gender of household head, and economic status of households?

The baseline survey will be to provide the necessary information to analyze these questions. In addition, the results will be broken down along the following dimensions:

- Geographic disaggregation – county level (Note that the sample size may not be large enough to provide statistically significant comparisons of most program indicators by county).
- Comparisons of indicators by:
 - Male/female headed households
 - Indicators of HH economic status (assets, income, HDDS, etc.)

Results broken down by these categories cannot be disaggregated by region. However, the sample will be sufficiently large to allow statistically significant comparisons across these groups for the program sample as a whole.

Analysis plan

- *Baseline values of program indicators*

a. Quantitative approach

Questionnaire design

TANGO will work closely with ACIDI/VOCA and partners to develop the survey instrument, field documentation and survey protocol to ensure that all project data needs are met and the highest quality data is collected. It is expected that the questionnaire development will be guided by the project's Intermediate Results and proposed IPTT indicators. Where necessary, all questions will be designed and framed as required by Food for Peace. Where unnecessary, other internationally recognized standards (i.e. FANTA, WHO, etc.) for household surveys will be applied. Subject to further review of final project documentation (e.g. IPTT, results framework, proposal, primary data already collected by ACIDI/VOCA etc.) and finalization of a contract between ACIDI/VOCA and TANGO, a brief outline of the proposed household questionnaire follows:³⁹

- Household demographic information (population structure, education, literacy, etc.)
- Household economy, including livelihood strategies and income sources (sources of income by gender, income estimates) as well as household expenditures, savings and credit and marketing opportunities
- Asset index
- Agricultural production (crops grown, yield estimates, access to land and inputs, techniques practiced)
- Maternal and child health and nutrition including anthropometrics, hygiene and child feeding behavior, ante-natal and post-natal care
- Disaster risk reduction, including knowledge and perceptions of DRR activities/infrastructure in surveyed communities.

Quantitative training and data collection

Prior to undertaking the survey, the TANGO consultant will provide a six day training workshop for quantitative enumerators. The purpose of the training is to ensure that everyone involved understands the objectives of the survey, the survey methods, sampling strategy, use of survey tools, and roles and responsibilities in data collection. Participants in the workshop will review every individual survey question for appropriateness, clarity and value of the information provided for the baseline survey. The workshop will discuss practical tips on questioning techniques, probing techniques, logical sequences and skip rules. As a part of the training workshop, participants will be given opportunities to interview

³⁹ This represents a very rough approximation of the household survey questionnaire and is subject to significant revision based on coordination and input from ACIDI/VOCA. This outline should be understood as a preliminary outline to provide ACIDI/VOCA with an idea of the proposed quantitative instrument.

households as part of a survey pre-test. Pre-testing the questionnaire will provide enumerators with an opportunity to gain practical experience in interviewing, introduce them to the field realities, identify any ambiguity in the questionnaire, and get a sense of the time required to collect household responses.

One component of the baseline survey will be collecting anthropometric data for children under five. Training on proper anthropometric measurement techniques will be provided by ACDI/VOCA, either internally or externally (e.g. UNICEF).

Data entry and analysis

TANGO will be responsible for designing a data mask using CSDPro (shareware) and providing training to data entry clerks if necessary. ACDI/VOCA will be responsible for hiring the data entry clerks and ensuring they have access to computers capable of running CSDPro. Data will be analyzed following a household livelihood security framework, which takes a holistic perspective to household food and livelihood security, determining the resources available to the households in the form of human, natural, social, political and economic capital. These household characteristics are then integrated with qualitative and community level data collected to provide contextual information on the overarching political and economic environment. The software used for analysis will likely be SPSS and WHO Anthro for the anthropometric data using the WHO 2006 reference population. Upon completion of quantitative data analysis, a clean data set and syntax file will be made available to ACDI/VOCA.

b. Sampling strategy

The sample design will be an “adequacy design”, or non-experimental design for simple pre-post comparison of results. This design is consistent with FFP requirements for baseline and end-line survey designs. The survey is “population-based” that is the sample is drawn randomly from the sample frame of all households residing within the action areas of the LAUNCH program. The sample size is determined to provide statistically representative results for indicators at the level of household and U5 children. The sample will be stratified by district, and within each district, a 2-stage selection process will be followed. First, villages will be selected using the PPS selection procedure, and then households will be randomly selected within each of the selected villages. Because no sample frame exists for drawing households at the village level, a random-walk process will be used to select households to be interviewed.

The scope of work did not give a clear indication of what stratification (if any) ACDI/VOCA Liberia desired. The sampling strategy below gives a minimum required sample size for one stratum.

Sample size calculations

Using the following formula, one can generate the minimum required sample for the baseline survey.^{40,41}

$n = D [(Z_{\alpha} + Z_{\beta})^2 * (P1 (1 - P1) + P2 (1 - P2)) / (P2 - P1)^2]$
<p>KEY:</p> <p>n = required minimum sample size per survey round or comparison group</p> <p>D = design effect</p> <p>P1 = the estimated level of an indicator measured as a proportion at the time of the first survey or for the control area</p> <p>P2 = the expected level of the indicator either at some future date or for the project area such that the</p>

⁴⁰ This calculates the minimum required sample per strata/survey round

⁴¹ Proportions are used rather than means because determining what a realistic reduction in mean z-score is less documented than reduction in stunting rates.

quantity (P2 - P1) is the size of the magnitude of change it is desired to be able to detect

Z_{α} = the Z-score corresponding to the degree of confidence with which it is desired to be able to conclude that an observed change of size (P2 - P1) would not have occurred by chance (α - the level of statistical significance), and

Z_{β} = the z-score corresponding to the degree of confidence with which it is desired to be certain of detecting a change of size (P2 - P1) if one actually occurred (β - statistical power).

The indicator used as the basis of sampling is stunting rates for children under five years of age. According to the 2007 Liberia DHS, Liberia has a 39% stunting rate for children under five, thus P1 is set at .39. The scope of work suggests that LAUNCH expects to reduce stunting by approximately ten percentage points over the course of the five year program. Using the following parameter values, the equation will yield the minimum required sample size per stratum:

- D** = 2.0
- P1** = .39
- P2** = .29
- Z_α** = 1.645 ($\alpha=0.95$)
- Z_β** = 0.84 ($\beta=0.80$)

The Liberian DHS 2007 shows that 17.7 percent of the population is under five and the average household size is five members. In addition, of 6,824 household successfully interviewed, 5,863 children were successfully measured. This suggests that between 80 and 85 percent of households will have a child in this age group.

Percentage point change	D	Minimum sample required (per stratum)	Increase sample to reach adequate # of U5s + 10% non-response	Approximate number of days of data collection ⁴²
10%	2.0	549	725	10

Village/household selection

TANGO will employ a two-stage cluster design for the baseline survey, with the first stage involving selection of clusters (villages) and the second stage being the selection of households. The sampling frame will consist of all villages targeted by LAUNCH and since this is a population-based survey, all households residing in these villages are eligible for interviewing. Villages will be selected using probability proportional to size (PPS) and households will be selected using either a random walk or segmentation method as outlined in the FANTA sampling guide. For reasons of logistics, villages with less than 30 reported households and villages that are inaccessible by road will be excluded from the sample frame.

Team leaders will be responsible for coordinating the household selection process and ensuring quality data collection. When enumerators encounter a household with a child under five, the enumerator will coordinate with the team leader and anthropometric team to collect the anthropometric data for all children aged 0 to 59 months in the household. It is anticipated that the quantitative team trainer will stay

⁴² This considers a team of 15 enumerators collecting 5 households per day and excludes all travel and contingency planning. These should be thought of as pure data collection days and used as rough indicator as to how long data collection will last.

for the first five days of data collection to supervise and ensure survey protocol is followed as well as verify data quality.

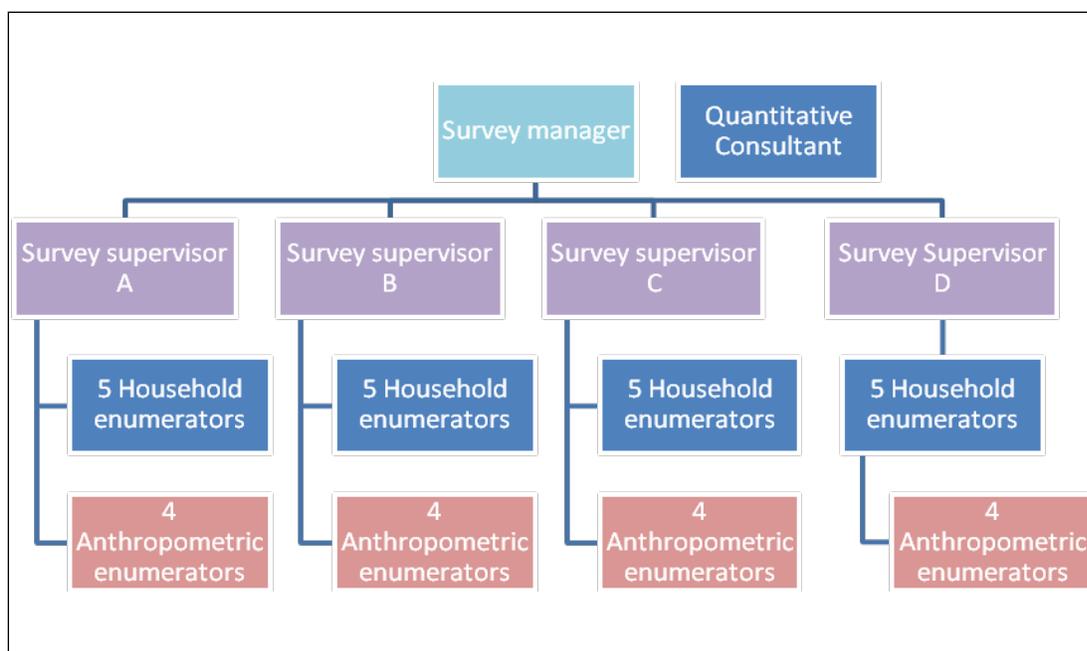
Logistics

The overall survey sample will be 725 households as per our proposal. According to the TOR, the project does not require any stratification (e.g. representative data for each district and/or county) “Since LAUNCH will be operating in two counties with very similar economic, health and demographic characteristics”. Based on experience from Bangladesh, five households/day is the absolute maximum number of interviews possible. However, assuming a questionnaire of similar length, travel between and within villages is likely to be more complicated and time-consuming in Liberia than Bangladesh. Therefore, it is not realistic to expect enumerators to conduct five interviews daily. I suggest we plan to have enumerators interview four households per day. The table below breaks down the number of villages and days of data collection. We need a comprehensive list of all villages and corresponding population in the intervention area, presumably from the 2008 census data, in order to determine the districts/villages to be surveyed.

A:	Minimum Sample size	725	
B:	# of HHs per cluster	20	
C:	# clusters (or villages)	37	=A/B (rounded up)
D:	Total # of interviews	740	=B*C
E:	# of household enumerators	20	
F:	# Interviews/day	4	
G:	Total # of HHs/day	80	=E*F
H:	# days of data collection (excluding travel time)	10	=D/G (rounded up)

We propose four teams of five enumerators, plus two additional teams of two enumerators each collecting anthropometric data (see figure below). The anthropometric team will be responsible for measuring children under five years of age. Since we assume that half of surveyed households will have children in this age group, approximately 10 households per surveyed village will have children that need to be measured. We also assume that the households will be dispersed over a wide geographic area, necessitating two anthropometric teams to cover the required number of households. This yields a total of 10 individuals per team (5 HH enumerators, 4 anthropometric enumerators, and 1 team leader). This means each quantitative survey team will need two vehicles for fieldwork, plus one vehicle for the survey manager/quantitative consultant, for a total of nine vehicles.

Figure 4: Potential LAUNCH Baseline quantitative survey team configuration



c. Quantitative Questionnaire

The baseline questionnaire will be developed to capture IPTT indicator's information which includes both FFP and OP indicators. Some additional questions will be included for program evaluation purposes. The draft of the quantitative questionnaire is provided in annex 1.

d. Training plan – Quantitative Survey

Training will be provided to all participants in the household survey – household interviewers, anthropometric enumerators, supervisors, and program M&E staff who will be coordinating the data collection and aggregation. Training will take place over a total of 6 days, with 4 days in a workshop and 2 days for field testing. The workshop component of the training will cover the following items:

1. Overview of the LAUNCH program
2. Review of the objectives of the Baseline survey
3. Detailed discussion of the questionnaire form (question-by question)
4. Training and testing on how to measure children
5. Training on use of PDAs
6. Training on administering the questionnaire with PDAs
7. Mock testing of the questionnaire

One key component in the training is providing interviewers with the necessary background and capacities to use PDAs in the field. All field staff will be provided with basic training on use of PDAs, including how to enter data, recharge the machine, and how to enter and use the survey software. Supervisors will also be provided with training on how to transfer data files from PDAs onto laptop computers. TANGO International has had a long experience of providing training to survey field staff on use of PDAs. The training modules on PDAs will be developed from materials already developed by TANGO.

Precise measurement of children is critical to get accurate measurements of anthropometric indicators. Substantial time will be allocated to provide training and practice on measuring children. Save the Children will identify an appropriate individual with the necessary experience to provide this training to the field team. Each member of the anthropometric measurement team will be tested for accuracy of their child measurements. Adequate measuring performance will be required in order for individuals to participate in child measurement.

Two days are scheduled for field tests. The first field visit will be a pilot test of the questionnaire. Time will be built into the calendar to allow for final changes in the questionnaire. The second field test will be to provide interviewers with additional experience in administering the questionnaire and using the PDA in the field.

e. Qualitative approach and tools

Qualitative information is a necessary input to analyzing the quantitative data. The qualitative team will consist of two teams composed of two qualified women and two qualified men per team for a total of eight individuals. Due to the focus of LAUNCH on women it is critical that there be at least one woman on each team with good English language skills. The qualitative team will receive five days of training on the qualitative tools and exercises, e.g. focus group facilitation, wealth ranking and seasonal calendars. This training will also consist of a pilot test to refine qualitative data collection instruments. A proposed training calendar is provided in Annex 2.

The qualitative team will use a combination of tools to implement the qualitative component of the baseline. It is understood that ACDI/VOCA's M&E experts have a high level of interest in working with the TANGO team in developing and/or finalizing the qualitative tools, and the qualitative expert is looking forward to working closely with stakeholders in developing these survey tools. In the interim, and to assist in the information exchange, TANGO proposes the following:

1. Information on the economic aspects of rural livelihood vulnerabilities, disaggregated by gender: This discussion will be assisted by using seasonal maps to provide site specific information on cropping patterns, crops planted, value added activities and opportunities, markets, work responsibilities, and by a 24 time allocation analysis, particularly for women. Specific information about various infrastructure services (roads, schools, health centres) as well as general population characteristics will be collected through key information interviews;
2. Information on the health aspects of rural livelihood vulnerabilities, disaggregated by gender, and by pregnant and lactating woman and children under the age of 2: This discussion should be conducted as semi-structured interview and should be directed to women's groups of various ages: (a) women past childbearing age (who may be mothers-in-law); (b) women of childbearing age; (c) unmarried women. Depending upon the secondary data reviewed and discussions with ACDI/VOCA a men's group may also be convened. In addition, key informant interviews with representatives from a health center, or from the district level Ministry of Health will provide additional contextual information;
3. Information on primary education and opportunities for other livelihoods based education, disaggregated by gender. This data will most likely be collected from adult male and female focus group discussions. Specific information sought will include barriers/challenges to achievement of primary education for boys and girls, and identification of opportunities for livelihoods based education.

Initial drafts of proposed topical outlines are provided in Annex 3.

f. Village selection for qualitative field work

It is common that the following primary topics are addressed through the qualitative work:

- Community contextual information that influence household and community decision-making;
- Ethnic and/or religious groups represented within the community;
- Migration patterns;
- Number and function of community-based organizations;
- Ongoing development activities and community priorities;
- Previous and current shocks to livelihood security, including community wide disasters;
- Primary sources of income;
- Land ownership, use and food production;
- Markets and value chains;
- Infant and young child feeding practices;
- Access to education and health care.

Given that the qualitative work will be conducted in a maximum of 10 villages, the selection of the villages must be purposeful to assist in the quantitative analysis. The Qualitative Leader will work closely with ACIDI/VOCA M&E staff to ensure that the villages selected will provide the most useful information in advance of the training.

Upon contract signature, and receipt of the complete proposal and any assessment done by ACIDI/VOCA in the process of preparing for the MYAP, the Qualitative Leader will propose draft semi-structured guidelines that will form the basis for the tools to be used in the field. Prior to arrival in Liberia, the draft guidelines will be completed. The five day training period will include reviewing and revising these guidelines, practicing the use of the proposed tools amongst each other, and then conducting a pre-test with all of the tools.

II. Quality Control

In addition to review of the proposal, sampling frameworks, questionnaire & guideline development, experienced partners of TANGO will be responsible for reviewing all products for accuracy, and to ensure they meet FFP standards, before they are submitted to ACIDI/VOCA for review. As demonstrated in the table above, TANGO personnel will take responsibility for the quality control in all of the above areas where they have primary responsibility.

During the data collection process, a number of steps will be taken in the field to ensure the quality of the data collected:

- Team supervisors will visit a sub-sample of interviewed households (10-15%) to crosscheck data collected by the enumerators. Any major discrepancies in data will be grounds for termination.
- The enumeration activity is done in teams or groups, where one individual is selected to be the group supervisor. The Quantitative Lead trains these supervisors how to answer any questions or resolve any technical problems after the Quantitative Lead has left the country.
- Quality control of the qualitative data collected will be ensured by the onsite presence of the Qualitative Lead throughout the activity. ACIDI/VOCA will be best served by using hired staff for this part of the baseline, as the tools can be used in the future, and there will be an institutional memory of the process. Care must be taken, however, that there are the same number as women as there are men on the teams – lower English language skills are a less problematic constraint when compared to the lack of females on the team.
- The team will analyze qualitative data as a group after each 2 days' of field work. This will allow some reflection and an opportunity for informal training, should this prove necessary.
- This analysis will then be shared with the Tucson office, and any recommendations to improve the analysis will then be provided to the Team Lead.

Because TANGO does not have the necessary expertise to develop the training materials or provide the training and supervision for the anthropometric measures required by the baseline, TANGO will not be

responsible for the quality of this data, unless the data received show results that significantly contradict other information about the Region.

The following matrix describes the primary and secondary roles and responsibilities of participants in the baseline throughout all stages of the assessment:

Action/Product	TANGO			LAUNCH		
	Team Leader	Quantitative Leader	Headquarters support, Tucson	ACDI/VOCA	Anthropometric Specialist	Enumerators (short term)
Prepare and submit proposal;	Secondary	Secondary	Primary	Secondary – REVIEW		
Identify alternative sampling design frameworks		Primary	Secondary – QUALITY CONTROL	Secondary – REVIEW		
Select sample design framework				Primary – DECISION TAKEN		
Populate universe for sampling		Secondary	Secondary – QUALITY CONTROL	Primary – PROVISION OF DATA FILES		
Develop sampling framework and proposed timeline		Primary	Secondary – QUALITY CONTROL	Secondary – REVIEW & FEEDBACK		
Agree upon strategy, timeline and budget			Primary – AGREEMENT REACHED	Primary – AGREEMENT REACHED		
Hire Enumerators			Secondary – QUALITY CONTROL	Primary – ACTION TAKEN		
Develop draft household surveys		Primary	Secondary – QUALITY CONTROL	Secondary – REVIEW & FEEDBACK		
Develop draft guidelines and tools for qualitative survey	Primary		Secondary – QUALITY CONTROL	Secondary REVIEW & FEEDBACK		
Develop draft materials for anthropometric training			Secondary	Secondary – REVIEW AND FEEDBACK	Primary	
Approve drafts of all tools for training				Primary – DECISION TAKEN		
Translate the drafts tools				Primary		
If required, arrange for translators to support the training			Secondary – PROVIDE INPUT	Primary		
Organize all training venues and materials, including materials for field				Primary – ACTION TAKEN		

trip & vehicles						
Provide training in all aspects of the survey as required	Primary (qual)	Primary (quant)	Secondary – QUALITY CONTROL	Secondary – PARTICIPATION AS DESIRED	Primary (Anthropometry)	Primary – PARTICIPANTS
Conduct quantitative survey		Primary	Secondary – QUALITY CONTROL	Secondary – PARTICIPATION AS DESIRED	Primary	Primary
Conduct qualitative survey	Primary		Secondary – QUALITY CONTROL	Primary – PARTICIPATION AS DESIRED	Secondary – PARTICIPATION AS DESIRED	
Provide direct oversight for a minimum of 5 days of quantitative survey		Primary				
Provide quality control review of all quantitative data after it is daily uploaded and forwarded to USA			Primary – QUALITY CONTROL			
Provide direct oversight for all qualitative data collection	Primary		Secondary – QUALITY CONTROL			
Prepare and provide a debrief of the process and, if possible, key issues emerging from the data	Primary	Secondary – QUALITY CONTROL	Secondary – QUALITY CONTROL	Secondary PARTICIPANT	Secondary PARTICIPANT	
Analyse quantitative and qualitative data for review	Primary (qual)	Primary (quant)	Secondary – QUALITY CONTROL		Primary (anthropometrics)	
Prepare draft baseline report	Primary – lead writer	Secondary – analyst	Secondary – QUALITY CONTROL			
Review and discuss feedback	Primary		Secondary – AS REQUIRED	Primary		
Final draft prepared & submitted	Primary		Secondary – AS REQUIRED			
Approve final report				Primary – DECISION TAKEN		

Annex 1. Draft Quantitative Questionnaire

Questionnaire # _____

Q.1 Do you agree to participate in the interview?

- Yes ... 1
- No 2

Q.2 Interview date (Month)

- February 1
- March 2

Q.3 Interview date (DAY)

day ____

Q.4 Team code

- A ... 1
- B ... 2
- C ... 3
- D ... 4

Q.5 HH interviewer code number

- 1 ... 1
- 2 ... 2
- 3 ... 3
- 4 ... 4
- 5 ... 5
- 6 ... 6

Q.6 Household ID number

- 1 ... 1
- 2 ... 2
- 3 ... 3
- 4 ... 4
- 5 ... 5
- 6 ... 6
- 7 ... 7

Q.7 Respondent's relation to the Household head

- Household head 1
- Spouse 2
- Child 3
- Parent/grandparent 4
- Brother/sister (including in-laws) 5
- Grand-child 6
- Cousin 7
- Nephew/niece 8
- Aunt/uncle 9
- Other 10

Q.8 What is NAME of Household Head?

Q.9 What is relation of [NAME] to household head?

- Household head 1
- Spouse 2
- Child 3
- Parent/grandparent 4
- Brother/sister (including in-laws) 5
- Grand-child 6
- Cousin 7
- Nephew/niece 8
- Aunt/uncle 9
- Other 10

Q.10 Sex of [NAME]

- Male 1
- Female ... 2

Q.11 Age of [NAME] (if less than 1 year, enter 0, Don't know = 99)

.....

[IF THE ANSWER TO QUESTION 11 IS 0-5 OR 18-99, THEN SKIP TO QUESTION 18]

Q.12 Is [NAME] currently attending school?

- Yes ... 1
- No 2

[IF THE ANSWER TO QUESTION 12 IS 1, THEN SKIP TO QUESTION 14]

Q.13 If no, why not? (up to 3 responses)

- Too young 1
- Working at home / on farm 2
- Cronically ill / disabled 3
- No school available / no teacher available 4
- Too expensive 5
- Not interested to attend 6
- Has completed secondary school 7
- Other 8

[IF THE ANSWER TO QUESTION 12 IS 2, THEN SKIP TO QUESTION 15]

Q.14 Current grade level

- Pre-school 1
- 1 2
- 2 3
- 3 4
- 4 5
- 5 6
- 6 7
- 7 8
- 8 9
- 9 10
- 10 11
- 11 12
- 12 13
- Post-secondary 14

Q.15 Did [NAME] attend school last year?

- Yes ... 1
- No 2

[IF THE ANSWER TO QUESTION 15 IS 1, THEN SKIP TO QUESTION 17]

Q.16 If no, why not? (up to 3 responses)

- Was too young last year 1
- Was sick/disabled 2
- No school / teacher available last year 3

- Was working at home / on farm last year 4
- Too expensive 5
- Not interested 6
- Other 7

[IF THE ANSWER TO QUESTION 15 IS 2, THEN SKIP TO QUESTION 18]

Q.17 Grade level last year

- Pre-school 1
- 1 2
- 2 3
- 3 4
- 4 5
- 5 6
- 6 7
- 7 8
- 8 9
- 9 10
- 10 11
- 11 12
- 12 13
- Post-secondary 14

[IF THE ANSWER TO QUESTION 11 IS 0-18, THEN SKIP TO QUESTION 19]

Q.18 Highest level of education level attained

- No formal education 1
- Can read/write 2
- Primary - incomplete 3
- Completed primary 4
- Secondary - incomplete 5
- Completed secondary 6
- Post-secondary 7

[IF THE ANSWER TO QUESTION 11 IS 0-14, THEN SKIP TO QUESTION 22]

Q.19 Has [NAME] received any training in farming or agricultural marketing?

- Yes ... 1
- No 2

[IF THE ANSWER TO QUESTION 19 IS 2, THEN SKIP TO QUESTION 22]

Q.20 Types of training received (indicate all that apply)

- Use of fertilizers (commercial/compost/mulch) 1
- Improved fertilizer application practices 2
- Improved planting/transplanting practices 3
- Improved pest/insect control practices 4
- Improved harvest practices 5
- Improved storage practices 6
- Improved cleaning practices 7
- Other 8

Q.21 Who provided training?

- Government (extension) 1
- ACDI/VOCA 2
- Other NGO 3
- Other 4

Q.22 Any more household members?

- Yes ... 1
- No 2

Q.23 Have you had any refugees from Cote D'Ivoire joined your household in the last 3 years?

Yes ... 1
No 2

[IF THE ANSWER TO QUESTION 23 IS , THEN SKIP TO QUESTION 25]

Q.24 Number of Ivorian refugees who have joined your household

Male adult —
Female adult —
Male child (0-17 years old) —
Female child (0-17 years old) —

Q.25 Which of the following types of foods did you or your anyone else in your household eat yesterday (during the day and in the night)

Interviewer: ask about each food category

cereals 1
roots/tubers 2
legumes/pulses 3
dairy products 4
meat/poultry/offal 5
fish/seafood 6

Q.26 Which of the following types of foods did you or your anyone else in your household eat yesterday (during the day and in the night)

Interviewer: ask about each food category

oils/fats 1
sugar/honey 2
fruits 3
eggs 4
vegetables 5
others 6

Q.27 In the past 12 months, were there months in which you did not have enough food to meet your family's needs?

yes 1
no 2

[IF THE ANSWER TO QUESTION 27 IS 2, THEN SKIP TO QUESTION 29]

Q.28 If yes, which were the months (last 12 months) in which you did not have enough food to meet your family's needs?

January 1
February 2
March 3
April 4
May 5
June 6
July 7
August 8
September 9
October 10
November 11
December 12

Q.29 What is the primary source of cash income for the household?

Sales of field crops 1
Business 2
Mining 3
Sale of cash crops 4
Skilled labour 5
Casual labour 6
Petty trade 7

Salary/government job	8
Remittances	9
Agricultural wage labour	10
Firewood/charcoal sales	11
Sales of livestock/products	12
Sales of orchard products	13
Handicrafts	14
Other gov't benefits	15
Begging	16
Other	17

Q.30 What are the other sources of cash income for the household?
(Select all that apply, up to 5 responses allowed)

Sales of field crops	1
Business	2
Mining	3
Sale of cash crops	4
Skilled labour	5
Casual labour	6
Petty trade	7
Salary/government job	8
Remittances	9
Agricultural wage labour	10
Firewood/charcoal sales	11
Sales of livestock/products	12
Sales of orchard products	13
Handicrafts	14
Other gov't benefits	15
Begging	16
No other sources of income	17
Other	18

Q.31 How has your household cash income changed over the past 3 years compared to previous years?
Increased 1
Stayed the same 2
Decreased 3

[IF THE ANSWER IS 2, THEN SKIP TO QUESTION 36]
[IF THE ANSWER TO QUESTION 31 IS NOT 1, THEN SKIP TO QUESTION 34]

Q.32 What are the reasons for increased income? (Please read responses aloud and select all that apply)

New/better job	1
Increased wages	2
More sources of household income	3
No disasters/shocks	4
No chronic illness of household member	5
Received more remittances	6
Better job training/knowledge	7
Increased sales from trading activities	8
Increased sales of own agricultural production	9
Other	10

Q.33 Which reason for increased income had the *greatest* impact?

New/better job	1
Increased wages	2
More sources of household income	3
No disasters/shocks	4
No chronic illness of household member	5
Received more remittances	6
Better job training/knowledge	7
Increased sales from trading activities	8
Increased sales of own agricultural production	9

Other 10

[IF THE ANSWER TO QUESTION 31 IS NOT 3, THEN SKIP TO QUESTION 36]

Q.34 What are the main reasons for decreased income?

- Lost job 1
- Decreased wages 2
- Fewer sources of income 3
- Disasters/shocks 4
- Chronic illness of household member 5
- Lack of remittances 6
- Decreased sales from trading activities 7
- Decreased sales of own agricultural/livestock production 8
- Other 9

Q.35 Which reason for decreased income had the *greatest* impact

- Lost job 1
- Decreased wages 2
- Fewer sources of income 3
- Disasters/shocks 4
- Chronic illness of household member 5
- Lack of remittances 6
- Decreased sales from trading activities 7
- Decreased sales of own agricultural/livestock production 8
- Other 9

Q.36 How do you perceive your own poverty status compared with 3 years ago?

- Better off today compared with 3 years ago 1
- Same today compared with 3 years ago 2
- Poorer today compared with 3 years ago 3

Q.37 Does your family have any cash savings?

- Yes ... 1
- No 2

[IF THE ANSWER TO QUESTION 37 IS 2, THEN SKIP TO QUESTION 39]

Q.38 Have your savings increased, decreased, or stayed the same over the past 3 years?

- Increased 1
- Decreased 2
- Stayed the same 3

Q.39 Has your household borrowed any money in the last year?

- Yes ... 1
- No 2

[IF THE ANSWER TO QUESTION 39 IS 2, THEN SKIP TO QUESTION 41]

Q.40 Sources of loans (indicate all that apply)

- Bank 1
- Microfinance 2
- community savings/credit group 3
- Family/friends 4
- Other 5

Q.41 Household assets: Please indicate the quantity owned of each asset

- Bed _____
- Radio/tape player _____
- Mobile phone _____
- Cutlass/axe _____
- Table _____
- Coal pot _____
- Generator _____

Q.42 Household assets continued

- Wheelbarrow ____
- Chair ____
- Bucket/tub ____
- Bicycle ____
- Mattress ____
- Cooking utensils ____
- Hoe/digger ____

Q.43 Is any member of your household engaged in agricultural activities?

- Yes ... 1
- No 2

[IF THE ANSWER IS 2, THEN SKIP TO QUESTION 59]

Q.44 Which crops did you cultivate over the last 12 months? (responses)

- rice 1
- cassava 2
- sweet potatoes/yams 3
- groundnuts 4
- rubber 5
- oil palm 6
- coffee 7
- cocoa 8
- banana 9
- mango 10
- banana 11
- papaya 12
- mango 13
- other 14

Q.45 How has your agricultural production been in general over the past three years, relative to previous years?

- Increased 1
- Stayed the same 2
- Decreased 3

[IF THE ANSWER IS 2, THEN SKIP TO QUESTION 48]

[IF THE ANSWER TO QUESTION 45 IS NOT 1, THEN SKIP TO QUESTION 47]

Q.46 What are the reasons for increased production? (Select all that apply)

- Improved/more seeds 1
- Improved/more tools 2
- Better access to water 3
- Good rains/weather 4
- More area planted 5
- Use of fertilizer 6
- Improved crop management practices 7
- More labor 8
- Improved roads/bridges 9
- Access to cleared swampland 10
- Rehabilitation of tree crops 11
- Other 12

[IF THE ANSWER TO QUESTION 45 IS NOT 3, THEN SKIP TO QUESTION 48]

Q.47 What are the reasons for decreased agricultural production? (Select all that apply)

- Poor quality/lack of seeds 1
- Poor quality/lack of tools 2
- Decreased access to water 3
- Poor/irregular rains/weather 4
- Less area planted 5

- Diminished soil quality 6
- Less labor 7
- Reduced access to markets 8
- Other 9

Q.48 What is the MOST IMPORTANT factor that keeps you from increasing agricultural production NOW?

- Lack of access to land 1
- Lack of seeds 2
- Lack of tools 3
- Lack of credit to purchase tools 4
- Not enough household labor 5
- Can't hire labor / hired labor too expensive 6
- Too busy in other activities 7
- Not interested to increase agricultural production 8
- Other (specify) 9

Q.49 What other reasons keep you from expanding agricultural production NOW? (up to 3 main reasons)

- No other reasons 1
- Lack of access to land 2
- Lack of seeds 3
- Lack of tools 4
- Lack of credit to purchase tools 5
- Not enough household labor 6
- Can't hire labor / hired labor too expensive 7
- Too busy in other activities 8
- Not interested to increase agricultural production 9
- Other (specify) 10

Q.50 Did you sell any agricultural production in the last season?

- Yes ... 1
- No 2

[IF THE ANSWER IS 2, THEN SKIP TO QUESTION 56]

Q.51 What is the estimated value of sales of all your crops in the past 12 months? (Dollars)

- Rice _____
- Maize _____
- Cassava/tubers _____
- Vegetables _____
- Rubber _____
- All other crops sold _____

Q.52 How have your sales of crops changed in the last 3 years?

- Increased 1
- Stayed the same 2
- Decreased 3

[IF THE ANSWER IS 2, THEN SKIP TO QUESTION 56]

Q.53 In the last 12 months did you sell any of your crops through a farmers' association or group of farmers in your village?

- Yes ... 1
- No 2

[IF THE ANSWER TO QUESTION 52 IS NOT 1, THEN SKIP TO QUESTION 55]

Q.54 What are the reasons for increases in crop sales? (Select all that apply)

- Better market access 1
- Higher crop prices 2
- Greater production 3
- Improved access to market information 4
- Improved storage 5
- Other 6

[IF THE ANSWER TO QUESTION 52 IS NOT 3, THEN SKIP TO QUESTION 56]

Q.55 What are the reasons for decreases in crop sales? (Select all that apply)

- Diminished market access 1
- Low crop prices 2
- Decreased production 3
- Lack of market information 4
- Lack of post-harvest storage 5
- Other 6

Q.56 Have you received any technical or material support in the past three years for your food/cash crops?

- Yes ... 1
- No 2

[IF THE ANSWER IS 2, THEN SKIP TO QUESTION 59]

Q.57 What kind of support have you received? (Select all that apply)

- Seeds 1
- Tools 2
- Training in food crop production 3
- Training in cash/tree crop production 4
- Training in agro-enterprise groups 5
- Improved irrigation infrastructure 6
- Improved transportation infrastructure 7
- Other 8

Q.58 From where did you receive support? (Select all that apply)

- Neighbor/relative 1
- Trader/shop 2
- MoA/Gov't 3
- NGO 4
- Other 5

Q.59 Do you have any animals?

- Yes ... 1
- No 2

[IF THE ANSWER IS 2, THEN SKIP TO QUESTION 70]

Q.60 How many animals do you have? (none=0, Don't know = 99)

- Cattle _____
- Goats _____
- Sheep _____
- Chickens/Ducks/Guinea fowl _____
- Pigs _____

Q.61 HOUSEHOLD WATER AND SANITATION

Q.62 What is your main source of household drinking water in the DRY SEASON?

- River/pond 1
- Cistern/rainwater 2
- Hand-dug well UNCOVERED 3
- Hand-dug well COVERED 4
- Borehole 5
- Other 6

Q.63 What is your main source of household drinking water in the RAINY SEASON?

- River/pond 1
- Cistern/rainwater 2
- Hand-dug well UNCOVERED 3
- Hand-dug well COVERED 4
- Borehole 5

Other 6

Q.64 Do you store water in your household in a covered container?

Yes ... 1
No 2

Q.65 Does your household have access to a latrine?

yes 1
no 2

[IF THE ANSWER IS 2, THEN SKIP TO QUESTION 69]

Q.66 What type of latrine facility? (Indicate the type used MOST FREQUENTLY)

Uncovered pit latrine 1
Covered pit latrine 2
Pour-flush latrine 3
VIP latrine 4
Sceptic latrine 5
Other 6

Q.67 Is this your own private latrine, or a community latrine

Private 1
Community 2

Q.68 Is this latrine currently being used by your household members?

Yes ... 1
No 2

Q.69 Has anyone in your household had diarrhea in the last 2 weeks?

Yes ... 1
No 2

Q.70 7. MOTHERS/CAREGIVERS OF CHILDREN UNDER 2

Q.71 THE REMAINING QUESTIONS ARE TO BE ASKED OF SPOUSE OF HOUSEHOLD HEAD,
OR FEMALE HOUSEHOLD HEAD

Q.72 HYGIENE BEHAVIORS

Q.73 When do you wash your hands?

Before food preparation 1
Before eating 2
Before feeding children 3
After defecation 4
After cleaning baby's bottom 5
Other 6

Q.74 CHILD FEEDING AND HEALTH

Q.75 Do you have any children 2 years old or younger, or are you currently pregnant?

yes 1
no 2

[IF THE ANSWER TO QUESTION 75 IS 2, THEN SKIP TO QUESTION 82]

Q.76 Are you currently pregnant?

yes 1
no 2
don't know 3

[IF THE ANSWER TO QUESTION 76 IS 2 OR 3, THEN SKIP TO QUESTION 78]

Q.77 How many months have you been pregnant for?

..... —

Q.78 Did you have any antenatal check-ups during your (**current/ last**) pregnancy?

- yes 1
- no 2

[IF THE ANSWER IS 2, THEN SKIP TO QUESTION 81]

Q.79 How many check-ups did you have during your (**current/last**) pregnancy?

..... —

Q.80 Do you have an antenatal card for your (**current/last**) pregnancy?

IF Yes: May I see it please?

- yes (seen) 1
- yes (not seen) 2
- no card 3

[IF THE ANSWER IS 2 OR 3, THEN SKIP TO QUESTION 82]

Q.81 Record number of visits documented in card

..... —

Q.82 INDIVIDUAL CHILD-RELATED QUESTIONS

Q.83 What is the name of your YOUNGEST CHILD?

Q.84 Sex of [CHILD NAME]

- male 1
- female 2

Q.85 Age of [CHILD NAME]

months _____

[IF THE ANSWER TO QUESTION 85 IS 24-99, THEN SKIP TO QUESTION 98]

Q.86 Did you ever breastfeed [CHILD NAME]]

- yes 1
- no 2

[IF THE ANSWER IS 2, THEN SKIP TO QUESTION 92]

Q.87 How long after birth did you first put [CHILD NAME] to the breast?

IF LESS THAN 1 HOUR, RECORD '00' HOURS.

IF LESS THAN 1 DAY RECORD IN HOURS (LEAVE DAYS BLANK)

IF MORE THAN 24 HOURS RECORD IN DAYS (LEAVE HOURS BLANK)

- hours _____
- days _____

Q.88 Did you give [CHILD NAME] the colostrum (the first milk which is yellow sticky fluid secreted the few days after delivery)?

- yes 1
- no 2

Q.89 Did you give anything to [CHILD NAME] before the first breast milk?

- yes 1
- no 2
- don't know 3

Q.90 Did you give anything to [CHILD NAME] after starting breastfeeding? (Within 24 hours after starting breastfeeding)

(Up to 3 responses allowed)

- No 1

- milk (cow/goat/powder) 2
- baby formula 3
- water/sugar water/honey 4
- medicine 5

Q.91 Was [CHILD NAME] breastfed yesterday during the day or night?

- yes 1
- no 2
- don't know 3

Q.92 Did [CHILD NAME] have any of the following liquids yesterday during the day or night?

(Up to 5 responses allowed)

- plain water 1
- sugar water 2
- infant formula 3
- tinned, powdered, or fresh animal milk 4
- juice, juice drink, green coconut 5
- yogurt 6
- ORS 7
- Nothing 8

Q.93 At any time yesterday or last night, was [CHILD NAME] given any liquid or solid food with breastfeeding?

- yes 1
- no 2

Q.94 Yesterday during the day or night, did [CHILD NAME] eat any of the following at home or outside home?

(up to 10 responses allowed)

- rice, bread, porridge, other foods made from grain 1
- Pumpkin, carrots, orange sweet potatoes 2
- White potatoes, white yams, other foods from roots 3
- Dark green leafy vegetables 4
- Ripe mangoes, ripe papayas, ripe jackfruits 5
- any other fruits or vegetables 6
- liver/kidney/heart 7
- any meat (chicken, beef, goat, duck, etc.) 8
- Eggs 9
- Fish, dried fish, seafood 10
- foods from beans, nuts, lentils 11
- milk or milk products 12
- oils, fats, butter, ghee 13
- sugary foods such as chocolates, candies, pastries, cakes, biscuits 14
- other 15
- nothing 16

Q.95 Yesterday during the day or night, how many times did [CHILD NAME] eat solid, semi-solid, or soft foods (foods other than liquids) at home or outside the home?

(don't know = 99)

..... ____

Q.96 Yesterday during the day or night did [CHILD NAME] drink anything from a bottle with a nipple?

- yes 1
- no 2
- don't know 3

Q.97 Yesterday during the day or night did [CHILD NAME] consume any food to which you added a nutrient powder (sprinkles/Monimix)?

- yes 1
- no 2
- don't know 3

Q.98 Does [CHILD NAME] have a vaccination card?

- Yes 1
- No 2
- Don't know ... 3

Q.99 Did (NAME) receive a BCG vaccination against tuberculosis, that is, an injection in the left shoulder that caused a scar?

- Yes - verified on vaccination card 1
- Yes - reported by mother 2
- No 3
- don't know 4
- Not applicable 5

Q.100 Did (NAME) receive a polio vaccine that is, drops in the mouth?

- Yes - verified on vaccination card 1
- Yes - reported by mother 2
- No 3
- don't know 4
- Not applicable 5

[IF THE ANSWER TO QUESTION 100 IS 2, THEN SKIP TO QUESTION 102]

Q.101 How many times did (NAME) receive polio vaccine:

- verified from card —
- reported by mother —

Q.102 819 Did (NAME) receive a DPT vaccination, that is, an injection given in the thigh or buttocks, sometimes at the same time as polio drops?

- Yes - verified on vaccination card 1
- Yes - reported by mother 2
- No 3
- don't know 4
- Not applicable 5

[IF THE ANSWER TO QUESTION 102 IS 2 OR 3, THEN SKIP TO QUESTION 104]

Q.103 820 How many times?

- verified from card —
- reported by mother —

Q.104 821 An injection to prevent measles after 9 months of age?

- Yes - verified on vaccination card 1
- Yes - reported by mother 2
- No 3
- don't know 4
- Not applicable 5

Q.105 THIS CONCLUDES THE INTERVIEW. THANK YOU

Annex 2. LAUNCH Baseline Survey Workshop Agenda
- QUALITATIVE TEAM -

Dates	Time	Activity
Day 1	AM	- Introduction - Housekeeping
		- A review of the project, its objectives. - A presentation of the LAUNCH baseline requirements; - How a qualitative baseline contributes to these requirements
		BREAK
		- Different tools used in qualitative information gathering:: (a) focus group discussions; (b) semi-structured interviews; (c) observations; (d) seasonal calendars; (e) historical timelines; (f) transects; (g) Venn diagrams, and others.
	PM	LUNCH
		- A review of the monitoring and evaluation plan, the IPTT. - Review of the Quantitative questionnaire and identifying where qualitative work will help analysis and ACIDI VOCA strategy
BREAK		
- Review of Quantitative questionnaire continued (group work) - Establish key objectives of the qualitative information-gathering component, , using the the IPTT indicators, TANGO objective		
Day 2	AM	- Review previous day's work. - Identify those village characteristics that are critical for the qualitative team to observe or document to meet the needs of the PROSHAR baseline - Identify a minimum of 5 villages out of the questionnaire sample population per village that would provide the most relevant information, based on these characteristics, one of which will be a "fall-back"
		BREAK
		- Determine the logistical and practicality of the initial selection and finalize the selection of 12 villages, with a list of the backup village - Document the rationale for the decision - Develop a plan for contacting the selected villages and instructions for the focus group discussions, key informant interviews, market observations, while ensuring that one additional village is selected for the qualitative baseline, in the event of a need for a change - Review of the preliminary guidelines prepared for the training to (a) confirm objectives of each focus group discussion; (b) confirm objectives of each key informant interview (semi-structured questionnaire); (c) ensure that all topics raised in the proposal and categories are covered; (d) identification of any gaps; - Determine how gaps could be filled with modifications of existing guidelines
		LUNCH
	PM	- Introduction to the use of a tool (seasonal calendars) to help guide the focus group topics

		- Review of key probing areas
		BREAK
		- Practicing holding a focus group discussion using a seasonal calendar

Day 3	AM	- Review previous day
		- Conduct analysis of the data collected in focus groups with seasonal calendar
		BREAK
	PM	- Identify gaps in the analysis and make adjustments as required to guidelines to ensure analytical gaps are covered
		- Review market observation guide
		LUNCH
- Practice holding a focus group discussion – round 2		
		- Practice Market observation
		BREAK
		- Review results
Day 4	AM	- Review previous day
		- Semi-structured questionnaires – purpose/ value to the analysis
		BREAK
	PM	- Practice semi-structured questionnaires
		LUNCH
		- Prepare for field test
- Safety and security debrief		
		BREAK
		- FIELD TEST – meeting with Village leaders
Day 5	AM	- FIELD TEST – focus group meetings, market observation
	PM	LUNCH
		- FIELD TEST
		BREAK
		- Review field test with team

Annex 3. Qualitative topical outlines
ACDI/VOCA LIBERIA
LAUNCH
Baseline Survey - Qualitative

Women's Focus Group
Food Security

Objectives:

- **To help inform the quantitative analysis as it relates to food production, crop losses and market access:**
- **To provide input to the following:**
 1. What are the major constraints to improved crop (vegetable) production?
 2. What are the major constraints to reduced crop losses?
 3. What factors (cultural, financial, other) contribute to reduced market access for women?
 4. What cultural constraints (eg, gender, age, religion, ethnicity) exist to improved crop production?
 5. What cultural constraints exist to reduced crop losses?
 6. How are intra-household decisions made between men and women regarding crop production, farm management, and marketing of crops?

Key Questions

- What agricultural use, production, post-harvest factors have contributed to food insecurity?
- What are the major constraints to improved crop production, reduced losses among the population?
- What percentage have received previous farmer training on improved methods? Why weren't the practices adopted?
- What percentage of the population currently use improved agricultural/technological practices that enhances food security?
- What factors contribute to reduced market access?
- What percentages grow a wide variety of crops; grow crops for cash, rear livestock?
- What methodologies would best ensure sustainability of improved farming methods?

Key Topics:

- Seasonality of food production
 - Constraints to improvements (technical, financial, cultural, environmental, biophysical, other)
 - Value-added activities
 - Household decision-making (gender roles)
- Seasonality of food consumption
 - Constraints to crop preservation (technical, financial, cultural, environmental, biophysical, other)
 - Household decision-making (gender roles)
- Seasonality of forage availability
 - Constraints to improvements (technical, financial, cultural, environmental, biophysical, other)
 - Household decision-making (gender roles)
- Seasonality of water for agricultural production
 - Constraints to improvements in water use management (technical, financial, cultural, environmental, biophysical, other)
 - Household decision-making (gender roles)

- Seasonality of women's work
 - Agricultural work
 - Non-agricultural employment or income generating work
 - Household decision-making (gender roles)
- Seasonality of women's expenditures
 - Household decision-making (gender roles)
- Seasonality of income earned by women
 - Constraints to market access (technical, financial, cultural, environmental, biophysical, other)
 - Point of sale - middlemen vs. direct to market
 - Sources of information on prices
- Seasonality of credit availability
 - Common types/terms of credit
 - Savings group schemes
 - Constraints to credit access (technical, financial, cultural, environmental, biophysical, other)
 - Household decision-making (gender roles)

The focus group discussion will be facilitated with a seasonal calendar, which will be used as a tool to probe issues related to constraints:

1. Find a large open space for the group. The calendar can be drawn on the ground or on very big sheets of paper.
2. Ask the participants to draw a matrix, indicating each month along one axis by a symbol.
3. It is usually easiest to start the calendar by asking about food production. Choose a symbol for food and put/draw it next to the column which participants will now use to illustrate the food production over the various months.
4. Talk about the types of food available (cereals, pulses, vegetables) and map which months they are most scarce. Ask the group to put seeds under the months when food is the scarcest (fewer seeds = less food is available).
5. Discuss the reasons why food is scarce in those months. If their food is produced locally, but is insufficient to meet all needs, probe to find out what constraints are faced in local food production and storage, including technical, financial, cultural, environmental, biophysical, or other constraints.
6. Make sure that the different types of food and social assistance (food aid, cash for work, other donor interventions) that people receive is discussed and that this information is recorded.
7. Ask participants to discuss which crops are consumed at home, and which are sold. Use this to lead into discussion on seasonal differences in food consumption, and on issues relating to food preservation and storage.
8. Continue with the other topics in the same manner, first discussing seasonal availability, then constraints.
9. Be sure to address gender relations and how decisions are made among spouses within the household on various topics above.

**ACDI/VOCA LIBERIA
LAUNCH
Baseline Survey - Qualitative**

**Women's Focus Group
Intra-household Food Distribution and Family Health**

Objectives: to understand the seasonality of intra-household food distribution and illnesses, and the constraints to good feeding and nutrition practices, and the differences in each of these aspects between “rich” and “poor” households

Key Questions

- What specific cultural issues affect feeding practices and beliefs about nutrition?
- What food use practices among women and children lead to malnourishment?
- What other factors contribute to malnourishment – food inadequacy, lack of knowledge, food distribution practices in the household?
- What is the current level of underweight and stunting of under 5 children (disaggregated by sex) in the population?
- What barriers are there to exclusive breastfeeding for the first six months of a child's life?
- What barriers are there to improved nutrition practices?
- What hygiene practices contribute to illness and malnourishment in the sample?
- What percentage of households has access to and use clean water from protected wells?
- What percentage has access to and uses latrines?
- What is the capacity of local existing organizations to engage in building wells, latrines?
- Have caregivers received previous hygiene education – what barriers are there to change?

Key Topics:

- Seasonality of intra-household food distribution
- Seasonality of potable water supply
 - Availability of protected water sources vs. use of convenient sources
- Seasonality of illnesses
 - Children
 - Adults
- Constraints (technical, financial, cultural, environmental, biophysical, other) to *available* health services
 - Children
 - Women only
 - Adults
 - Decision-makers on health services
 - Sources of drugs purchased
- Constraints (technical, financial, cultural, environmental, biophysical, other) to *accessible* health services
 - Children
 - Women only
 - Adults
 - Sources of drugs purchased
- Infant breastfeeding practices
 - Current practices
 - Influence of household members on breastfeeding practices
 - Barriers to improved practice (cultural, other constraints)

- Nutrition practices
 - Household decision-makers on nutrition
 - Cultural beliefs (constraints) about nutrition
 - Barriers to good nutrition (cultural, financial, other)

The process will be similar to the focus group related to food production described above. The focus group will be facilitated using a seasonal calendar as a discussion tool.

1. Find a large open space for the group. The calendar can be drawn on the ground or on very big sheets of paper.
2. Ask the participants to draw a matrix, indicating each month along one axis by a symbol.
3. The facilitator will explain that s/he would like the group to talk about how changes in food supply during the year affect how people in their household eat – how much each person eats, how frequently each person in the household eats, and what kind of food each person eats, when food is scarce.
 - a. Make sure that the different types of food and social assistance that people receive is discussed and that this information is recorded.
4. For potable water supply, ask the participants to show on the calendar which months have the least amount of potable water available. Discuss why water is scarce (e.g., flooding, dry wells, etc). Discuss which water sources are used for what purpose (e.g., cooking, washing dishes, drinking),
 - a. Keep in mind that households may use the closest water source rather than the one they know is protected due to convenience.
5. For illnesses, ask the participants to discuss the major illnesses in the community. Have them show on the calendar which illnesses occur in which seasons (or months). Discuss who is most affected by different illnesses, and why.
6. Use the above to lead into discussion of health care services.
7. Use the calendar to explore the other topics in a similar manner.
8. Be sure to discuss constraints (technical, financial, cultural, environmental, biophysical, other) to feeding practices, nutrition, access to health services, etc.

**ACDI/VOCA LIBERIA
LAUNCH
Baseline Survey - Qualitative**

**Men's Focus Group
Food Security**

Objectives:

- **To help inform the quantitative analysis as it relates to crop production, crop losses and market access:**
- **To provide input to the following:**
 1. What are the major constraints to improved crop (aman, aus, boro) production?
 2. What are the major constraints to reduced crop losses?
 3. What factors influence crop production for cash? For food?
 4. What factors influence livestock rearing for cash? For food?
 5. What factors contribute to reduced market access for men?
 6. How are intra-household decisions made between men and women regarding crop production, farm management, and marketing of crops?

Key Questions

- What agricultural use, production, post-harvest factors have contributed to food insecurity?
- What are the major constraints to improved crop production, reduced losses among the population?
- What percentage have received previous farmer training on improved methods? Why weren't the practices adopted?
- What percentage of the population currently use improved agricultural/technological practices that enhances food security?
- What factors contribute to reduced market access?
- What percentages grow a wide variety of crops; grow crops for cash, rear livestock?
- What methodologies would best ensure sustainability of improved farming methods?

Key Topics:

- Seasonality of food availability
 - Type, desirability (quality)
 - Constraints to production by season (technical, financial, cultural, environmental, biophysical, other)
 - Household decision-making (gender roles)
- Seasonality of water availability
 - Water availability by type (rainfall, irrigation, other)
 - For aman/aus production
 - For irrigated rice production
 - Household decision-making (gender roles) on water use management
- Seasonality of men's income
 - Barriers to increased income (technical, financial, cultural, environmental, biophysical, other)
 - Crops sold in bulk or individually
 - Value-added activities
 - Household decision-making (gender roles) on management of men's income
- Seasonality of men's expenditures
 - Household decision-making (gender roles) on management of men's expenditures

- Seasonality of men's input access
 - Input suppliers
 - Pricing/credit arrangements
- Seasonality of livestock forage
 - Household decision-making (gender roles) on livestock management
- Seasonality of credit availability
 - Common types and terms
 - Barriers to access (technical, financial, cultural, other)
 - Household decision-making (gender roles) on use of credit
- Seasonality of men's year-round workload
 - Agricultural
 - Non-agricultural

A seasonal calendar will be used to facilitate the discussion. After the seasonal nature of the topic is discussed, surveyors will then probe into the practices, barriers and constraints faced by men in this village:

1. Find a large open space for the group. The calendar can be drawn on the ground or on very big sheets of paper.
2. Ask the participants to draw a matrix, indicating each month along one axis by a symbol.
3. It is usually easiest to start the calendar by asking about food production. Choose a symbol for food and put/draw it next to the column which participants will now use to illustrate the food production over the various months.
4. Talk about the types of food available (cereals, pulses, vegetables) and map which months they are most scarce. Ask the group to put seeds under the months when food is the scarcest (fewer seeds = less food is available).
5. Discuss the reasons why food is scarce in those months. If their food is produced locally, but is insufficient to meet all needs, probe to find out what constraints (technical, financial, cultural, environmental, biophysical, other) are faced in local food production and storage.
6. Make sure that the different types of food and social assistance that people receive is discussed and that this information is recorded.
7. Continue with the other topics in the same manner, first discussing seasonal availability, then constraints.
8. Be sure to address gender relations and how decisions are made among spouses within the household on all of the above.

**ACDI/VOCA LIBERIA
LAUNCH
Baseline Survey - Qualitative**

**Men's Focus Group
Intra-household Food Distribution and Family Health**

Objectives: to understand the seasonality of intra-household food distribution and illnesses, and the constraints to good feeding and nutrition practices.

Key Questions

- What specific cultural issues affect feeding practices and beliefs about nutrition?
- What food use practices among women and children lead to malnourishment?
- What other factors contribute to malnourishment – food inadequacy, lack of knowledge, food distribution practices in the household?
- What is the current level of underweight and stunting of under 5 children (disaggregated by sex) in the population?
- What barriers are there to exclusive breastfeeding for the first six months of a child's life?
- What barriers are there to improved nutrition practices?
- What hygiene practices contribute to illness and malnourishment in the sample?
- What percentage of households has access to and use clean water from protected wells?
- What percentage has access to and uses latrines?
- What is the capacity of local existing organizations to engage in building wells, latrines?
- Have caregivers received previous hygiene education – what barriers are there to change?

Key Topics:

- Seasonality of intrahousehold food distribution
- Seasonality of illnesses
 - Adult
 - Child
- Constraints to *available* health services (technical, financial, cultural, environmental, biophysical, other)
 - Child
 - Women only
 - Adults
- Constraints to *accessible* health services (technical, financial, cultural, environmental, biophysical, other)
 - Child
 - Women only
 - Adults
- Nutrition practices
 - Household decision-makers on nutrition
 - Cultural beliefs about nutrition
 - Barriers to good nutrition (technical, financial, cultural, environmental, biophysical, other)

A seasonal calendar will be used to facilitate discussions. After seasonality is discussed, practices and barriers to improvements in the above topic areas will be probed, as appropriate.

1. Find a large open space for the group. The calendar can be drawn on the ground or on very big sheets of paper.
2. Ask the participants to draw a matrix, indicating each month along one axis by a symbol.
3. The facilitator will explain that s/he would like the group to talk about how changes in food supply during the year affect how people in their household eat – how much each person eats, how frequently each person in the household eats, and what kind of food each person eats, when food is scarce.
 - a. Make sure that the different types of food and social assistance that people receive is discussed and that this information is recorded.
4. For illnesses, ask the participants to discuss the major illnesses in the community. Have them show on the calendar which illnesses occur in which seasons (or months). Discuss what illnesses affect people in their household, who is most affected in their households by different illnesses, and why.
5. Use the above to lead into discussion of health care services.
6. Use the calendar to explore the other topics in a similar manner.
7. Be sure to discuss constraints (technical, financial, cultural, environmental, biophysical, other) to good nutrition, access to health services, etc.

**ACDI/VOCA LIBERIA
LAUNCH
Baseline Survey - Qualitative**

**FOCUS GROUP: VILLAGE LEADERS
CONTEXTUAL SITUATION OF SAMPLED VILLAGES**

1. VILLAGE

1.1. Village : _____

1.2. County: _____

1.3. Date: |__| |__| / |__| |__| / 2011
 Day Month

1.6 Name of Interviewee: _____

2. VILLAGE INFRASTRUCTURE

2.1 Is the principal route into the village passable year round for

2.1.1 Transport of goods to/from markets? Yes No

2.1.2 Transport of persons for medical care ? Yes No

2.2. If not, how are

2.2.1 Goods transported to market ?

2.2.2 Sick persons transported for medical
care? _____

2.3 Is there a primary school in this village ? Yes No

2.4 Is there a secondary school in this village ? Yes No

2.5 Is there a functioning adult literacy program in this village ? Yes No

2.6 Is there a daily market in this village ? Yes No

2.7 Is there a weekly market in this village ? Yes No

2.8 If no to 2.6 and 2.7, what is the distance from this village to the closest market.

2.9 Is there any functioning formal credit program in this village? Yes No

2.10 Is there any program providing agricultural support or technical support to farmers in this
village at this time ? Yes No

2.11 Is there a pharmacy in this village ? Yes No

2.12 Is there a functioning health facility in this village ? Yes No

2.12.1 If yes, what type of health facility is it?

2.13 What are the sources for **potable** water in this village ?

2.13.1 Closed pumps /_____/ 2.13.1.1 Months usable (/12) ____/

2.13.2 Traditional wells /_____/ 2.13.2.1 Months usable (/12) ____/

2.14 Of all of the revenue sources, which is the most important to the majority of households?

- 2.14. 1 Male-headed households that own
land _____
- 2.14. 2 Households that rent/lease
land _____
- 2.14. 3 Households without access to any land (i.e., landless)
- 2.14. 4 Female-headed households

3 DEMOGRAPHICS

3.1 Total Population Estimate	Number of Households			
	3.2 Total	3.3 Male-headed households	3.4 Female headed households)	3.5 households with at least one migrating family member at least part of the year

4 DISASTERS

4.1 Please identify any disasters that have occurred community-wide in the last ten years (this may require prompting, such as droughts, floods, pest infestations, etc.). What was their impact? What was the government response, if any? What was the effect of the response?

Type of Disaster/Year	Impact on Community	Government Response	Effect

4.2 Who in the community is most vulnerable to natural disasters? (*note: get information on different types of households – female-headed; absentee head of household; elderly-headed, ultra poor, etc.*)

4.2.1 Why are these households more vulnerable ?

4.3 What type of household is most vulnerable as a result of major illness in the family?

4.3.1. Why are these households more vulnerable?

4.4 In your opinion, what percentage of the village would fit under each of the categories of households mentioned above?

4.5 Has food distribution occurred in this county in the last 5 years for any reason ? Yes
 No

4.5.1 If yes, for what reason? What was the effect of the food distribution?: (if they do not mention any malnutrition or school feeding programs, then prompt to ensure that this hasn't occurred in this village).

Month/Year	Target group for Food Distribution	Method of Food Distribution	Effect

4.6 Are you aware of any disaster preparedness planning occurring in the county? Yes
 No

4.6.1. If yes, please describe the process.

4.6.2. What was the role of you and your advisors in the process ?

4.6.3. Has a disaster response, based on the plan been put into action? Yes No

4.6.4. If yes, when and why?

4.6.5. What was the effect of implementation of the disaster response plan? Was it in response to a specific shock or disaster event?

4.7. If an extreme food shortage occurs due to disaster, what is the most effective way of distributing food ?

4.7.1 Why is this way the most effective ?

5 INTRA-HOUSEHOLD DECISION MAKING ON FOOD SECURITY

5.1 How are decisions being made within the household with regard to achieving food security or responding to problems of attaining food security?

5.3 Who makes specific decisions?

5.3 How are resources allocated to achieve food security?

5.4 How are resources reallocated in case of food insecurity?

6. COMMUNITY HEALTH MOBILIZATION

6.1 Do any local community health care groups exist for training of local health practitioners or community health volunteers? If so, when and how were they established?

6.2 Have any donor-funded programs (government, NGOs, etc.) been introduced that use a health care group approach in training local health practitioners or community health volunteers? If so, when and how were they established?

6.3 If any community health care groups exist, how effective have they been to date in training local health care practitioners, and what resources are needed to improve the health care training of such groups?

7. IMPROVED EDUCATIONAL OPPORTUNITIES

7.1 Do you believe there is a need for skills training of youth to become agro-entrepreneurs, or small business farmers? If so, what specific skills training is needed?

7.2 How can primary schools better educate youth to develop practical skills in becoming entrepreneurs and small businesses in agriculture?

7.3 Does your community have a Parent Teachers Association? How can the PTA be better trained to support the local development needs of youth in the community?

8. CONSTRAINTS TO FOOD SECURITY AND LIVELIHOODS

Note : This question will be framed after discussion with qualitative survey teams to determine the most appropriate way to obtain this data. The objective is to see if the priorities of village leaders match the vulnerabilities identified in that village.

CONSTRAINT	IMPORTANCE (in rank)	SOLUTION	
		Planned	Implemented
1. Financial			
2. Technical			
3. Environmental/Biophysical			
4. Cultural			

COMMENTS:

ACDI/VOCA LAUNCH
Baseline Survey - Qualitative
MARKET OBSERVATIONS

NOTE TO REVIEWERS: ONCE FEEDBACK IS PROVIDED ON THE IMPORTANCE OF THIS MODULE, INCLUDING RECOMMENDED CHANGES, THE TOOL WILL BE FORMATTED FOR USE BY ENUMERATORS

Description: Whenever there is a market operating in any of the villages where information is being collected, a combination of team observation of market operations through a “walkabout” and informal discussions with vendors and the market manager will form an important part of the qualitative work.

Objectives: to have an understanding of basic market functioning and of current price or availability problems. If you expect that there are local availability problems in some areas, but not in others, you can concentrate your survey resources on the expected problem areas. If you know in advance that prices are extremely high throughout the areas, you would focus on understanding the causes.

NOTE: THIS WILL CAPTURE THE STATE OF THE MARKET AT THIS POINT IN THE SEASON (POST EID, AND RICE HARVEST) TO HELP WITH THE ANALYSIS. IN NO WAY IS THIS TO BE CONSIDERED A FULL MARKET ANALYSIS. THIS EXISTS TO FURTHER INFORM PARTICULAR ISSUES: IF POSSIBLE, A DISCUSSION WITH THE “MANAGER” OF THE MARKET (THE PERSON WHO TAKES THE FEES) COULD BE USEFUL, BUT CANNOT SUBSTITUTE FOR A VISUAL OBSERVATION:

WHAT TO LOOK FOR:

1. Is there electricity in the market?
 - a. If yes, who uses it?
2. Is there a separate part of the market set aside for women to sell their production?
3. What proportion of vendors are women?
 - a. What are the women primarily selling?
4. Is there potable water available in the market for both sellers and buyers?
 - a. If so, what is the condition of the source of potable water?
5. What are the sanitation (WC, latrine, other) facilities like?
 - a. Are there separate facilities for women and for men?
6. How many people are selling in this market that you observe?
 - a. (<50,50-100, more than 100)
 - b. Men/Women
7. How many people do you see in the market making purchases
 - a. (<500, 500-1000, 1000-2000, >2000)
8. What are the most common items sold (list no more than 5)? For the top three categories of items sold, check the prices with a MINIMUM of four vendors for each category. Examples are:
 - a. Staple Crops: (eg. rice, maize, sorghum, millet, other)
 - b. Processed Foods (canned or dried vegetables, fruits, fish, meat, etc.)
 - c. Fresh Vegetables: (potatoes, carrots, cabbage, onions, garlic, tomatoes, etc.)
 - d. Fresh Fruits (bananas, mangos, papayas, pineapples, oranges, etc.)
 - e. Fresh Fish
 - f. Fresh Meat
 - g. Beverages (soda, juice, milk, alcohol, etc.)
 - h. Cloth shops

- i. Clothing/shoes
 - j. Prepared foods for immediate consumption or as “take-away”
 - k. Building materials
 - l. Agricultural inputs, such as fertilizer, seeds.
 - m. Household items such as pots, pans, knives, spoons, batteries
 - n. Handicrafts, such as embroidery, home-made clothes;
 - o. Medicines (aspirin, ORS, etc.)
9. Are there tailors operating in the market?
- a. If so, how many?
 - b. Men/Women
10. Are there any other skilled trades operating in the market?
- a. If so list and
 - b. Note how many Men/Women operating in this trade

MARKET OBSERVATION WILL NEED TO BE SUPPORTED WITH INFORMATION WHICH COULD BE OBTAINED BY TALKING WITH SOME VENDORS AND/OR WITH THE MARKET MANAGER:

- 1. What are the daily fees for selling at this market? (this will need to be asked of a number of vendors to validate)
- 2. If there is electricity, what is the procedure and cost of accessing this electricity?
- 3. How does the present number of people selling and buying at the market compare at different times of the year?