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Baseline Evaluation

December 2018

LIFFT-Cashew Project in Senegal, The Gambia, and Guinea-Bissau: Baseline Evaluation Report

Arete conducted a baseline assessment of Shelter for Life's Linking Infrastructure, Finance, and Farms To Cashew (LIFFT-Cashew), a six-year United States Department of Agriculture (USDA) funded Food for Progress Program (FFPr) in Senegal, the Gambia, and Guinea-Bissau (SeGaBi). The program focuses on multiple aspects of the cashew value chain by upgrading existing linkages and building new linkages to create a more integrated and durable regional network that will enhance the cultivation of cashew and the processing and selling of cashew products. Based on the OECD-DAC criteria, the baseline evaluation established baseline values for each indicator, generated a first set of data for comparative analysis throughout the project, developed tools for monitoring throughout the life of the project, identified challenges and opportunities for program implementation, and provided recommendations for future implementation. Arete interfaced with Shelter for Life project staff as well as USDA officials in the planning, implementation, and analysis stage of the project. For this project, using a mixed-methods approach, Arete conducted numerous interviews and focus groups with several stakeholders including intended project beneficiaries, SFL staff, government leaders, and USDA staff, as well as surveys of cashew-related business owners and cashew producers.

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Evaluation Authored by: Arete Evaluation Collaborative

DISCLAIMER: The author's views expressed in this publication do not necessarily reflect the views of the United States Department of Agriculture or the United States Government.



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The Arete Evaluation Collaborative was deeply saddened by the tragic death of one of its data collection supervisors, Youssouf Mamadou Thiello, in a car accident during the fieldwork in Ziguinchor, Senegal. We would like to offer our deepest sympathies to Thiello's family and friends, and thank our evaluation team for dealing so well with this tragic loss during our fieldwork.



Youssouf Mamadou Thiello of Libreville, Gabon, 22nd March 1982 – 15th March 2018

ACRONYMS

Acronym	Meaning of Acronym
Arete or Arete Team	Arete Evaluation Collaborative Team
ACA	African Cashew Alliance
AJAC	Association des Jeunes Agriculteurs de Casamance
ANAG	Associação Nacional dos Agricultores da Guiné Bissau
BPRM	The United States Bureau of Population, Refugees, and Migration
CAJ	Cashew Apple Juice
CFA, FCFA	West African Franc
CFW	Cash-for-Work
COAJQ	Cooperativa Agri-Pecuária de Jovens Quadros
COFAC	Cadre de Concertation des Opérateurs de la Filière Anacarde de la Casamance
DCW	Digital Chart of the World
ECOWAS	Economic Community of West African States
EIP	Enhanced Integrated Framework
FUNDEI	Fonds Pour Développement des Entreprises et de L'Industrie
FUNPI	Fonds National pour la Promotion Industrielle
FFPr	Food for Progress
GAP	Good Agricultural Practices
HA	Hectare
HACCP	Hazard Analysis for Critical Control Point (a food safety management system)
IRD	International Relief & Development NGO
KG	Kilogram
LIFFT-CASHEW/LIFFT	Shelter for Life's Linking Infrastructure, Finance, Farms to Cashew Program
MFDC	Mouvement des Forces Démocratiques de la Casamance
MTE	Mid-Term Evaluation
MT	Metric Ton
M&E	Monitoring and Evaluation
NGO	Non-Governmental Organization
PADEC	Programmed' Appui au Développement Economique de la Casamance
PSM	Propensity Score Matching
PPP	Public Private Partnership
RCN	Raw Cashew Nut
RN6	Senegal's Route National 6
RWE	RealWorld Evaluation
SeGaBi	Senegal, The Gambia, Guinea-Bissau

SFL	Shelter For Life International
SMEs	Small-Medium Enterprises
SRR	SFL Senegal Rural Roads Project
USA	United States of America
USAID	United States Agency for International Development
USD	United States Dollar
USDA	United States Department of Agriculture

EXECUTIVE SUMMARY

Shelter For Life International (SFL) is an international Christian humanitarian organization based in Minnesota, USA that supports displaced persons, refugees, migrants, and those suffering from conflict and disaster to rebuild their lives and communities through shelter and community development programs. SFL will implement the Linking Infrastructure, Finance, and Farms To Cashew (LIFFT-Cashew), a six-year United States Department of Agriculture (USDA) funded Food for Progress Program (FFPr) in Senegal, The Gambia, and Guinea-Bissau (SeGaBi). The program proposes to address multiple aspects of the cashew value chain by upgrading existing, and building new linkages to create a more integrated and durable regional network that will enhance the cultivation of cashew and the processing and selling of cashew products.

The five main components of the LIFFT-Cashew program are (1) Market Infrastructure, (2) Financial Services, (3) Market Access and Linkages, and (4) On-Farm Practices. Further, SFL is (5) developing and managing a scalable database platform to store cashew-related production data, market information, and borrowers' information. The program beneficiaries for the LIFFT-Cashew program include cashew farmers, cashew kernel processors, cashew-related businesses, cash-for-work laborers, and financial institutions.

The baseline assessment aims to achieve the following objectives:

1. Establish baseline values for each indicator (standard and custom);
2. Establish final targets for each indicator;
3. Set the stage for robust project monitoring by establishing stakeholder questionnaires to be used throughout the program;
4. Assess validity of assumptions regarding context and program design;
5. Building on data collected in the Cashew Value Chain Study conducted by TechnoServe in February 2018, and identifying potential opportunities and challenges to program implementation that will be used to develop overall management strategies;
6. Generate a first set of data for comparative analysis throughout the life of the program.

The Arete Team conducted a participatory baseline study of the LIFFT-Cashew program using mixed methods to gather robust quantitative and qualitative data. Baseline data was supported by both a quasi-experimental and non-experimental design. The quasi-experimental design will be implemented over the period of data collection to observe differences between cashew producers who directly benefit from the construction of roads near their households and cashew producers who will not have roads constructed near their households. The non-experimental design will also be implemented over the period of data collection, allowing for the assessment of impact on both

producers and other program beneficiaries. The Arete Team conducted household cashew producer surveys, enterprise surveys, focus group discussions (FGDs), key informant interviews, and document reviews to gather baseline programmatic information and quantitative and qualitative data about stakeholders. The first phase of fieldwork for the baseline evaluation took place from 25 February 2018 to 11 April 2018 in Senegal, The Gambia, and Guinea-Bissau. Five Arete Team members and 27 enumerators conducted the fieldwork. Arete collected data from: cashew producers using a producer survey; cashew-related enterprises using an enterprise survey; and other key stakeholders, including cashew producers, financial institutions, government officials, SFL and USDA staff, and additional cashew value chain actors, using key informant interview and focus group protocols.

Key Findings from the Baseline Evaluation:

Component 1: Market Infrastructure

Activity 1: Infrastructure: Feeder and Connector Roads

- The request for improved roads for the transport of cashew and other goods, was prominent across the three countries.
- Nearly all cashew producers in this study are selling their product either at the farm or in the village, as the distance to the nearest town is much farther.
- This leads to lower bargaining power for producers. Buyers must come directly to the farm or village, taking on the burden and risk of additional transportation, and therefore negotiating a lower price with producers.

Activity 2: Infrastructure: Post-Harvest Handling and Storage

- The majority of cashew producers surveyed lack access to individual or communal storage spaces. Therefore, during the harvest, they store raw cashew nuts (RCN) in their homes or sell each day for cash to meet immediate needs.
- Producers surveyed store RCN for one month or less. Most also lack space to dry RCN and often sell it without drying.
- Processors who export processed cashew kernel, often store RCN for 6 months or more due to limited capacity both to store RCN and process the required quantity of kernel for export. A processor in Senegal, for example, had to process 16 tons for export, taking 6 months.

Component 2: Financial Services

Activity 3: Financial Services: Facilitate Agricultural Lending

- All stakeholders interviewed including producers, processors, NGOs, government officials, and financial institutions concurred that producers have limited access to finance.
- Seventeen percent of producers surveyed in Senegal, 20% in The Gambia, and 5% in Guinea-Bissau have a bank account.
- Fewer producers surveyed have received credit or a loan related to cashew production (10% in Senegal, less than 1% in The Gambia, and less than 1% in Guinea-Bissau).
- Most producers surveyed have not applied for credit, most commonly due to the risk of losing any collateral they may have, a lack of collateral, or distance to the bank.
- Multiple stakeholders reported that those in the agricultural sector are seen as high risk by financial institutions, and there are very few “farmer-friendly banks.”
- However, some efforts by financial institutions, processors, and governments to assist producers do exist. A producer in Senegal noted that last year Crédit Mutuel du Sénégal (CMS) began lending to some producers so that they could store RCN until end of the harvest. A processor in The Gambia stated that he offered pre-financing to producers at the beginning of the harvest in order to lock them into a contract. An official at the Ministry of Trade in The Gambia described a small and medium-sized entrepreneur (SME) fund being developed by the government that will target about 2,000 producers and other agricultural entrepreneurs for loans. Similarly, in Guinea-Bissau, a guarantee fund offered by the government, bilateral partners, and a commercial bank was initiated. The fund was accessed primarily by middlemen.

Activity 4: Financial Services: Cashew Fund

- Access to finance is also limited to other actors along the cashew value chain. Processors interviewed noted that interest rates are high, the lending period is short, and collateral is difficult to secure.
- Three out of 26 enterprises surveyed borrowed money (2 in Senegal and 1 in The Gambia) to purchase raw material or equipment, maintain equipment, or improve premises. Of the 3 enterprises, one obtained a loan from a bank. The others accessed loans from a client or family. Some processing enterprises stated that they lack access to finance and have difficulty securing loans from a bank. They view banks as not serving their needs, even though some expressed interest in receiving a loan for business needs.

Component 3: Market Access and Linkages

Activity 5: Capacity Building: Cashew Marketing Associations

- Very few cashew producers, or their household, (10% in Senegal, 8% in The Gambia, and 3% in Guinea-Bissau) are members of cashew marketing organizations that deal with selling and marketing cashew. This might be because marketing associations are typically part of donor or NGO programs that attempt to support new products, instead of those that have emerged organically from the communities themselves.
- As a result, most producers get information about selling prices by word-of-mouth from family, friends, and neighbors.

Activity 6: Market Access: Facilitate Buyer-Seller Relationships

- Most producers sell at farmgate or in the village to middlemen. Producers prefer to remove middlemen and sell directly to buyers.
- In each country, 93% of producers in Senegal, 90% in The Gambia, and 96% in Guinea-Bissau, reported that middlemen or local shopkeepers represent the most frequent buyers of RCN.
- 81% of enterprises surveyed do not currently have a company website and would need assistance to develop their technology to market, brand, and sell their products online.
- Of 26 enterprises surveyed, the majority (11 in Senegal, 6 in Guinea-Bissau, and 4 in The Gambia), sell their products to domestic buyers.

Activity 7: Capacity Building: Trade Associations

- Many producers and processors surveyed expressed a need for more effective trade associations, to improve trade linkages and to assist in engaging with the cashew value chain.
- Trade associations could provide producers with access to credit as well as financial management skills that can enable them to better run their cashew farms as businesses.
- Associations interviewed in this study expressed interest in increasing their membership in order to have more collective bargaining power in the value chain.

Component 4: On Farm Practices

Activity 8: Agricultural Development: Demonstration Plots and Nurseries

- Cashew producers in each country recognize the need for and desire training in better agricultural practices.
- Of producers surveyed, 74% reported that they lack knowledge of new agricultural practices to increase productivity, and 83% reported that they have not participated in trainings or demonstrations related to agricultural best practices.

- Of those producers surveyed who said they had knowledge of new agricultural practices as provided in Figure 30, 1% in Senegal, 2% in The Gambia, and none in Guinea-Bissau reported to be knowledgeable of cashew selling practices.
- Significant disparities exist between men and women, with 25% of men reporting use of new agricultural techniques compared to 6% of women.
- At the country level, The Gambia has the largest percentage (41%) of farmers who declared to have knowledge about new agricultural practices compared to 20% in Senegal and 18% in Guinea-Bissau.
- While producers report being aware of “best” practices such as drying RCN, cleaning and general maintenance of the farm, spacing of cashew trees and intercropping between trees, and direct planting of seeds, 80% to 88% reported that they have not recently participated in trainings or demonstrations of such practices. Table 2 provides baseline data for producers surveyed who practice recommended agricultural techniques.
- Based on our conversations with producers, processors, government officials, etc., most producers do not dry RCN prior to selling due to lack of space and a need for daily cash; cleaning is done just before harvest season, rather than continuously during the year; many farms consist of trees that are not adequately spaced; and rodents and other animals often eat seedlings or seeds planted directly into the soil.
- Producers expressed interest in learning about and implementing improved agricultural practices including: better varieties of cashew trees, fencing to contain stray animals and discourage theft, and methods to reduce the occurrence of brush fires.

Cross-Functional Activity

Activity 9: Management of Information Systems

- Based on conversations with producers, most producers receive knowledge of cashew selling price by word of mouth in all countries. In Guinea-Bissau, radio is also a common means of distributing information about price.
- In each country, government or government partnerships with NGOs have initiated programs to deliver market information to producers by means of a phone-based SMS text messaging system.

Key Opportunities and Challenges for SFL:

Opportunities for the Program:

1. **SFL is trusted in the Casamance Region because of Rural Road Rehabilitation and Construction Projects:** The improved roads are tangible examples that have helped SFL

to build trust in the Casamance region of Senegal and with many stakeholders in Guinea-Bissau and The Gambia.

2. **Project Components are Highly Relevant to Articulated Needs and Desires of Cashew Value Chain Actors:** Key stakeholders stated that the various components of the LIFFT-Cashew program are relevant and should be implemented. Their relevance will support SFL's ability to meet the needs of its beneficiaries and to create good working relationships.
3. **Surveyed Governmental Actors Involved in the Cashew Sector Are Interested in the Project:** The governments of Senegal and The Gambia increasingly support the cashew sector. The government of Guinea-Bissau oversees the cashew sector through a regulatory agency. Government involvement should help SFL build working relationships with the relevant agencies and to assess government engagement with existing and newly established interprofession organizations. Appendix D provides key government agencies and interprofession organizations in each country.

Challenges in the Cashew Value Chain in the Region:

1. **Poor Road Conditions:** The poor condition of feeder and connector roads limits travel and transport of RCN and other products between cashew farms, villages, and main roads. The roads directly impact producers and other value chain actors that access the farms. Until all roads accessed by value chain actors are improved, the current road conditions may limit the impact of the other program components.
2. **The Problem of Middlemen:** Key stakeholders, including producers, processors, interprofession organizations, and financial experts, concurred that the current system of RCN trade that consists of exporters and their hired middlemen exploits producers. Middlemen buy RCN directly from producers. In addition, village shopkeepers or local young men buy RCN from producers and sell it to middlemen who in turn sell to traders and exporters, each adding a commission to the sale. Producers are aware of the exploitation, but often need cash to meet immediate expenses, and are therefore more willing to accept a lower, non-negotiable price. The effect of the current buying system on producers will only diminish as a new and more equitable structure supported by all of the program components is developed.
3. **A Lack of Financing or Credit to Support the Cashew Value Chain:** Lack of access to finance is a common problem for cashew producers and a range of cashew-related enterprises. Banks must be convinced or incentivized to reduce the restrictive terms for lending to producers and processors. And simultaneously, producers in particular, must improve their financial literacy.
4. **Institutional Instability and Banking Issues in Guinea-Bissau:** Guinea-Bissau is considered one of the poorest and fragile countries. Stakeholders commented that the

banking sector is generally weak in Guinea-Bissau, and there is even less access to finance for those in the cashew sector. Building the banking sector to more effectively support the cashew value chain may be even more challenging in a country considered to be one of the poorest and least politically stable.

Key Recommendations for SFL from Arete Evaluation Collaborative:

1. **Encourage the Formation of Cashew Marketing Associations and Support Trade Associations Early in the Project to Allow Time for Training and Capacity Building:** Producers and processors seem ready and willing to form associations; yet most producers are not currently involved in an association. It might take some time before the associations will be working in a way that could accomplish some of the goals they have, so starting earlier in the project implementation to form these groups would be a wise strategy.
2. **Focus Early in Project Implementation on Assistance to Processors and Development of Processing Units:** Processors and other cashew value chain organizations in each country stated that limited access to finance prevent them from purchasing enough RCN to process at full capacity, and to maintain their infrastructure. In addition, processors cannot to compete with international buyers to purchase RCN, and sometimes will buy RCN from middlemen. Yet, processing facilities provide jobs, and a sustainable processing industry in the region, would provide more employment, particularly for women who are the majority of the workforce in processing based on our observation. We recommend that SFL focus early on assistance to processors and the development of processing units to build on this potential.
3. **Consider Carefully How to Engage with Middlemen:** Understand the system of RCN buyers; the levels of aggregation from shopkeepers or local boys in the village, to the middlemen, to the large-scale traders and exporters, many of whom are internationals. Engage carefully with RCN buyers as their interest is not necessarily for the producers. Instead focus more on government agencies and interprofession organizations. However, do maintain contact and transparency with traders and exporters, both foreign and domestic.
4. **Consider a Specific Focus on Women in the Cashew Value Chain:** Women work throughout the cashew value chain, including processing the cashew apple, and working in commercial processing plants and in drying and packing facilities. Few women were observed in leadership roles in cashew associations or government. Women also face the challenge of access to land ownership and securing sufficient RCN for their processing activities based on our interviews and focus groups.
5. **Gain a Better Understanding of Youth Cashew Producers:** While Arete engaged with a limited number of youth producers, they face challenges similar to adult and family

producers. Youth producers are often part of an intergenerational category of producers working on kin-tenure land.

6. **Assist Producers to Better Balance Cash Crops and Subsistence Crops to Avoid Periods of Hunger:** Cashew farmers in the SeGaBi region often face hunger between the harvest of cashew and other cash crops. While a range of factors impact food insecurity during these periods, SFL should include in training in “best” agricultural practices information about intercropping subsistence crops with cashew.
7. **Access the Untapped Potential of the Cashew Apple:** Many women process the cashew apple into juice, jam, wine, and other products. Women processors work in women-owned cooperatives, informal women’s groups, and as individuals. Some received initial funding to launch their processing enterprises, but these women need additional access to finance to maintain or expand their operations, receive training, and market their products. SFL should support these local initiatives as both an additional and immediate income source for families and as a means of increasing, longer term, the economic power of women, as well as incorporating additional cashew products into the market.

PROGRAM BACKGROUND

The following Baseline Assessment Final Report was developed by Arete Evaluation Collaborative (Arete) for Shelter For Life International (SFL), a not-for-profit organization based in Minnesota, USA. As an international humanitarian organization with over 25 years of experience, SFL supports displaced persons, refugees, migrants, and those suffering from conflict and disaster to rebuild their lives and communities through shelter and community development programs. SFL will implement the Linking Infrastructure, Finance, and Farms To Cashew (LIFFT-Cashew), a six-year United States Department of Agriculture (USDA) funded Food for Progress Program (FFPr) in Senegal, The Gambia, and Guinea-Bissau (SeGaBi) from 2018 to approximately 2024. The program proposes to address multiple aspects of the cashew value chain by enhancing current relationships and links between parts of the value chain, and building new relationships and links to create a more integrated and durable regional network that will enhance the cultivation of cashews and the processing and selling of cashew products.

SeGaBi Region

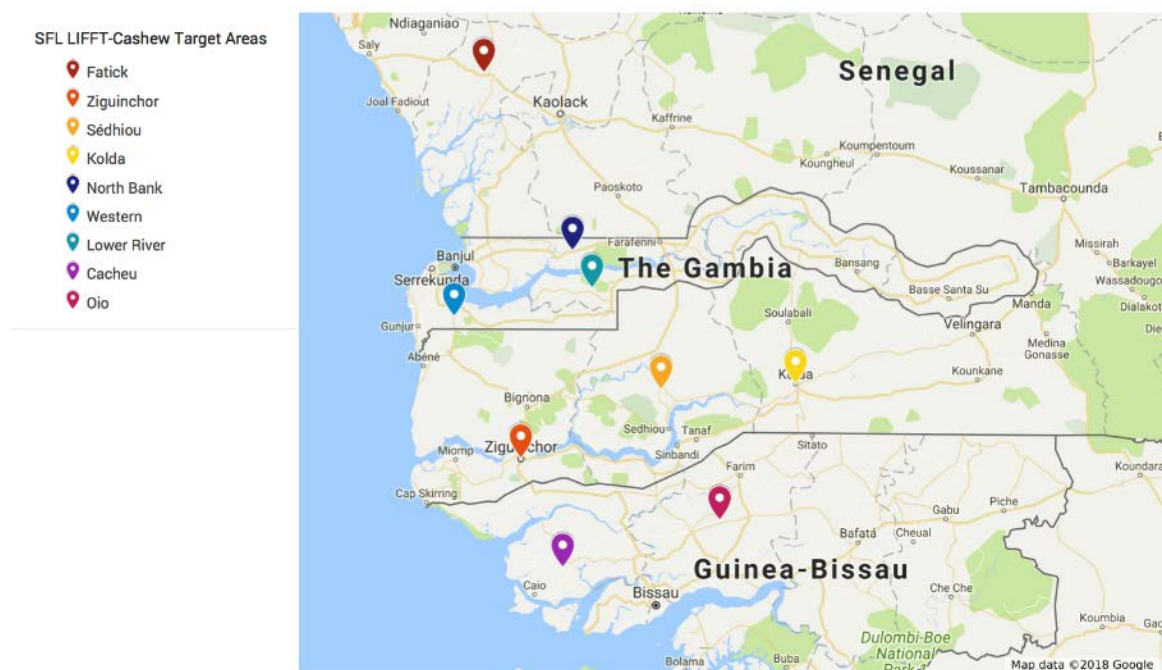


Figure 1: Map of key locations for intended implementation of the LIFFT-Cashew program

The LIFFT-Cashew program consists of five programmatic components: (1) market infrastructure, (2) financial services, (3) market access and linkages, and (4) on-farm practices. Furthermore, SFL is (5) developing and managing a scalable database platform to store cashew-related production



Raw cashew nuts in The Gambia (Source: Julie Warner, Arete Team)

data, market information, and borrowers' information. The program will address infrastructure by building or rehabilitating roads that connect farmers to markets, training communities on basic road maintenance, and by constructing cashew storage units. Access to financial services will be improved by working with local financial institutions to increase lending to farmers and businesses, and by creating a Cashew Fund for investment in small and medium cashew businesses. Market access and linkages will be strengthened through the establishment and reinforcement of cashew marketing associations, the capacity building of local trade associations, and the facilitation of buyer-seller relationships. And finally, on-farm practices will include the development of demonstration plots, cashew nurseries, in-kind grants, and training opportunities.

Program beneficiaries include cashew producers, cashew kernel processors, cashew-related businesses, cash-for-work laborers, and financial institutions. In particular, the program will target women and youth to increase their access to and participation in all aspects of the cashew value chain.

The main purpose of the baseline assessment is “to identify program-specific benchmarks and indicators that will be referred to during the mid-term and final evaluations to measure change and the program’s contribution to impact.”¹ The objectives of the baseline assessment provided in the SFL Monitoring and Evaluation Plan are as follows:

- Establish baseline values for each indicator (standard and custom);
- Establish final targets for each indicator;
- Set the stage for robust project monitoring by establishing stakeholder questionnaires to be used throughout the program;
- Assess validity of assumptions regarding context and program design;
- Building on data collected in the Cashew Value Chain Study conducted by TechnoServe in February 2018, and identifying potential opportunities and challenges to program implementation that will be used to develop strategies for overall management;
- Generate a first set of data for comparative analysis throughout the life of the program.

¹ Shelter For Life International, Scope of Work: Baseline Assessment for LIFFT-Cashew, February 2018.

OPPORTUNITIES AND CHALLENGES FOR THE LIFFT-CASHEW PROGRAM

OPPORTUNITIES

This section offers “opportunities” to strengthen the position of SFL to implement the LIFFT-Cashew program in the SeGaBi region.

1. **SFL is trusted in the Casamance Region because of its History of Road Construction:** The improved roads are tangible examples that have helped SFL to build trust. There is more confidence among stakeholders that SFL will implement the LIFFT-Cashew project in good faith, including the building of more roads. The relationships that SFL has built in the Casamance will assist the organization to engage with additional stakeholders throughout the region.
2. **Project Components are Highly Relevant to Articulated Needs and Desires of Cashew Value Chain Actors:** Key stakeholders, including producers, processors, and other value chain actors, stated that components of the LIFFT-Cashew program are relevant and should be implemented. Their relevance will support SFL’s ability to meet the needs of its beneficiaries and to create good working relationships.
3. **The Governments of Senegal and The Gambia Increasingly Support the Cashew Sector:** Interviews with government officials engaged in the agricultural sector indicated an increase in programs geared to develop the cashew value chain, providing an opportunity for SFL to engage with relevant government stakeholders, and to gain their direct support.
4. **The Government of Guinea-Bissau and Other Actors in Country are Engaged in the Cashew Sector:** In Guinea-Bissau, the cashew sector is alive and producing income for various stakeholders, and it is highly likely that effective interventions supporting critical segments of the value chain will be well regarded.
5. **Attention from Some US Governmental Stakeholders:** SFL noted that while formal connections have not been established, other US governmental donors (specifically USAID and BPRM) expressed interest in the LIFFT-Cashew program. This could provide SFL with the opportunity to build connections with other interested parties who likely have certain similar goals.

CHALLENGES

In this section, key stakeholders and the Arete Team identified challenges in the cashew sector in the SeGaBi region that may impact implementation of the LIFFT-Cashew program. These are presented as challenges that LIFFT-Cashew program components will address, and as larger, more contextual challenges that the program may not be able to address.

CHALLENGES TO BE DIRECTLY ADDRESSED BY THE LIFFT-CASHEW PROGRAM

1. **Poor Conditions of Roads:** The poor conditions of feeder and connector roads make it difficult to travel and to transport RCN and other products between cashew farms, villages, and main roads. The roads directly impact producers and other value chain actors that access the farms. The more roads that are built or improved, the larger the positive impact on key actors.
2. **The Problem of Middlemen:** Key stakeholders, including producers, processors, interprofession organizations, and financial experts, concurred that the current system of RCN trade that consists of exporters and their hired middlemen exploits producers. Middlemen buy RCN directly from producers. In addition, village shopkeepers or local young men buy RCN from producers and sell it to middlemen who in turn sell to traders and exporters, each adding a commission to the sale. Producers are aware of the exploitation, but often need cash to meet immediate expenses, and are therefore more willing to accept a lower, non-negotiable price. While the system of middlemen will not disappear completely, implementation of the LIFFT-Cashew program will build producer capacity and begin to reduce the exploitative nature of the current buying system.
3. **The Tightly Controlled, Secretive Nature of the Business of Foreign Buyers:** Based on the perspective of several stakeholders, foreign traders in the cashew sector are well connected and financed. SFL may face difficulty in building relationships as traders may view SFL and the LIFFT-Cashew program as opposing their interests. Therefore, while SFL should maintain transparent relations with traders, it should focus on strengthening relations with and between cashew interprofession organizations and government agencies engaged in the cashew sector in each country.
4. **Difficulties to Reach Domestic and International Markets:** Enterprise representatives discussed difficulties transporting products to domestic and international markets, including: lack of information on international market prices; the relative isolation of the Casamance region and the distance to markets in Dakar; high transportation costs; and security concerns as indicated by numerous security checkpoints around the region. The LIFFT-Cashew program components should indirectly impact these challenges. Longer-term change will take time as the region stabilizes and the market continues to develop.
5. **Local Processors Have Difficulties to Export:** Cashew enterprise representatives stated that international buyers have strict requirements for quantity and quality of processed cashew kernel, although the requirements were enterprise specific. Buyers often want full containers of approximately 16 tons for export, yet small processors need about 6 months to fulfill this quantity. In addition, some buyers request that enterprises have specific certifications that are expensive and time consuming to acquire. The LIFFT-cashew program components that focus on improving access to finance could help processors to achieve full processing capacity to better meet the demand for quantity. The components

that focus on agricultural “best” practices will help to increase the quality of RCN for processors. And, better functioning cashew marketing and trade associations could assist enterprises to acquire the necessary certifications.

6. **A Lack of Financing or Credit for the Cashew Value Chain:** Lack of access to finance is a common problem for a range of cashew-related enterprises and producers. The LIFFT-Cashew program component on finance will attempt to directly address access by working with lending institutions to build capacity, and through the Cashew Fund to provide equity investments, loan guarantees, or an appropriate mechanism as determined by the program team.

CHALLENGES THE LIFFT-CASHEW PROGRAM MAY NOT BE ABLE TO ADDRESS

1. **Lack of Adequate Equipment for Processing:** Processing units were observed to lack adequate packaging and conditioning equipment necessary for production quality and quantity. The lack of necessary equipment creates barriers for processors to compete in the international market.
2. **Instability of Lending Institutions in Guinea-Bissau:** Stakeholders noted the weak banking sector in Guinea-Bissau, providing less access to finance for those in the cashew sector than banks in Senegal or The Gambia. Producers cited incidents of losing money due to bank failure, and that banks face significant security risks. This will pose a challenge to SFL as it implements the LIFFT-Cashew program in Guinea-Bissau.
3. **Complex Nature of the Intervention:** This program seeks to address a complex value chain in the SeGaBi region and will have to contend with contextual realities of the region while implementing a multifaceted intervention. This will require wisdom, good relationships, and strong planning to coordinate program components at multiple locations along the value chain.
4. **Trends in the Global Cashew Market:** Shifts in the global cashew market are another factor that SFL will have to be aware of as they implement the project. According to key informants, actors in the Asian cashew market are working on increasing production quality and quantity making West African cashew potentially less profitable in those markets. After the 2017 peak in RCN price, informants predicted a price decrease, particularly as consumption patterns in high profit US & European markets change due to new supply, substitutes for cashew, or other related trends. These factors could be either impediments to success, or opportunities for SFL to leverage.

RECOMMENDATIONS FOR THE LIFFT-CASHEW PROGRAM

PROJECT STAKEHOLDERS' RECOMMENDATIONS

The stakeholders we interviewed made the following recommendations for the upcoming project based on their personal understanding and assessment of the cashew industry in their respective countries:

1. **Rehabilitate or Construct More Roads:** Stakeholders across the value chain recommended rehabilitating existing or constructing new roads as a critical element for producers and for other actors who regularly access the farms and villages to purchase and transport RCN and other agricultural products.
2. **Consider Carefully how to Engage with Middlemen:** Understand the system of RCN buyers; the levels of aggregation from shopkeepers or young men in the village, to the middlemen who come to the village, to the large-scale traders and exporters, many of whom are internationals. Producers stated that they believe they are exploited by middlemen, and prefer to sell directly to the larger traders for a better price. As the LIFFT-Cashew program is implemented and producers have more access to resources, particularly financing, they will no longer be forced to sell RCN to middlemen on a daily basis for cash. They will have more choice such as to accumulate RCN until later to bargain for a better price, or enter into direct contracts with local processors. As these changes occur, SFL should consider carefully how to engage with the foreign buyers and their middlemen, and to envision what their role may be in the value chain.
3. **Increase Cashew Processing in the Region:** Stakeholders across the value chain recommended building the processing industry in the region. Processing provides jobs, and a series of processing units around the region would improve employment, especially for women. They commented that processing is currently weak and that many processors, from small cooperatives to larger commercial operations, are in need of assistance that the LIFFT-Cashew program could offer.
4. **Assist Cashew Value Chain Actors to Access Finance:** Stakeholders along the value chain struggle to get financing. Key informants stressed the importance of SFL helping to provide access to finance through this project. This likely involves working with government actors and banks to access credit, and possibly having a guarantee fund for cashew producers and processors. An increase in access to financing for producers and processors will enable existing and new plantations to grow varieties with a higher yield that will better serve local processing potential.
5. **Build Relationships with the Project Stakeholders:** Building direct relationships are important to a successful project. As a cashew-related enterprise director in The Gambia

stated in reference to numerous public billboards with IRD and USAID logos, “SFL does not need to be the billboards that we see with IRD and USAID [...] they [IRD and USAID] do not really get to know the people. Because you need to really be inside the country making those relationships with the people that matter.” SFL should focus on building stakeholder relationships so that value chain actors are able to name what SFL has accomplished in their areas and trust SFL in its work.

6. **Engage with Government Actors and Interprofession Organizations Involved in the Cashew Value Chain:** With a view toward building the cashew value chain and increasing economic opportunity in the region, SFL should build relationships with key government and interprofessions in the three countries in an attempt to provide influence for policy, laws, or initiatives that may impact the cashew sector. More generally, SFL should gather information and be aware of the cashew-related activities of these stakeholders in each country and across the three countries. Appendix D provides key government agencies and interprofession organizations with oversight of or involvement in the cashew sector in each country. SFL should understand the current status, specific focus, and effectiveness of each.
7. **Improve Producer-Processor Relationships to Stabilize RCN Supply and Demand:** As the components of the LIFFT-Cashew program are implemented, SFL should facilitate increased linkages between producers and processors to create a more stable supply of RCN from producers that matches the demand from processors.
8. **Train Processors on New Techniques and Tools to Better Respond to Market Demand:** Processors need techniques and tools to better respond to market demand such as best practices related to packaging and processing, and to access new processing technology. The LIFFT-Cashew program should facilitate training in best practices and access to new technologies. This might also include sending partners to relevant conferences and utilizing various cashew partnerships that could allow the processors to have better techniques or tools.
9. **Producers Should Organize into Cooperatives for Better Bargaining Power:** Producer cooperatives would likely have better access to finance, an easier time creating communal storage facilities, and better bargaining power with buyers than producers operating alone. SFL should engage with the existing producer cooperatives to better understand the structure and level of effectiveness of each as a means of improving existing and encouraging the formation of new cooperatives.
10. **Technical Training:** Stakeholders, including interprofession organizations, government officials, processors and producers themselves, recognize that producers need training in better agricultural practices to improve the quality and yield of cashew. This includes: knowledge of the varieties cashew plants, treating soils, when to collect the RCN, how to plant the trees, pruning of trees, and disease management. These stakeholders also advised

that producers receive training in basic finance and accounting to better manage their farms as a business. This would improve the livelihood of producers and provide a better and more reliable product for processors.

11. **Consider Careful Selection of Beneficiaries for the Financial Components of the Project:** A stakeholder involved in agricultural finance stressed that banks maintain strict requirements from potential customers requesting loans to avoid default of those loans. Thus, SFL should ensure a rigorous selection process for producers considered to receive loans, and confirm that producers have the necessary documentation. This should reduce risk for the banks who might otherwise be skeptical of providing loans to cashew processors or other related enterprises.
12. **Create Product Traceability Methods and Assist Enterprises to Acquire Certifications:** Government officials stated that the cashew industry should develop traceability for its products, especially as it increases engagement with international buyers who require traceability. In addition, cashew-related enterprises expressed the need for assistance with various certifications such as HACCP and Fair Trade that are time consuming and expensive to secure.
13. **Consider the Agricultural Method of Using Bio-Char:** A stakeholder recommended that SFL research the use of bio-char, an environmentally sustainable process in which charcoal is added to the soil to retain fertilizer throughout the rainy season, as another agricultural “best” practice.
14. **Consider the Role of Waste Cashew Shells in the Value Chain:** While some cashew-related enterprises already use the discarded shells to produce energy (Table 11), one enterprise transforms the shells into a type of charcoal. This enterprise owner suggested that SFL consider how processors in India and Vietnam use the shells, and engage with local processors to determine how the waste shells can add value.
15. **Review the Program of IRD:** Leaders from a cashew association recommended that SFL review the cashew value chain project that IRD conducted in the region to understand which components worked well and which ones did not, even if SFL does not duplicate the program directly. Leaders of the cashew association praised some aspects of the program such as the text message system, and suggested that SFL consider implementing these activities into their program.

ARETE'S RECOMMENDATIONS

Based on results of the baseline assessment, the Arete Team includes the following recommendations for the project implementation:

1. **Encourage the Formation of Cashew Marketing Associations Early in the Project to Allow Time for Training and Capacity Building:** 10% or fewer producers across the three countries report participation in a producer organization or cooperative (See Figure 25). Combining existing associations or forming new ones in areas where none exist, and doing it early in the program would allow producers to form economies of scale for the sale of RCN and other cashew-related products, transport their products together, improve their collective bargaining power, share techniques and knowledge, as well as form social bonds with one another. Further, connecting these associations with processors would help to build the local processing sector. It could be helpful to SFL to engage with frameworks and practices of contemporary labor unions to help develop the capacity of these associations and strengthen the position on the value chain for both producers and processors. It will take time for the associations to function effectively, so starting earlier in the project implementation to form these groups would be a wise strategy, so they could eventually develop into sustainable and strong associations.
2. **Focus Early in the Project to Provide Assistance to Processors and Develop New Processing Units:** Processors and other cashew value chain organizations in each country commented that processors have limited access to finance to pay for the purchase of enough RCN to process at full capacity, and to maintain their infrastructure. In addition, processors are unable to compete with international buyers to purchase RCN, and sometimes will buy RCN from middlemen. Yet, processing facilities provide jobs, and if a sustainable processing industry can be built in the region, there will be more employment, particularly for women who already form the majority of the workforce in processing. Several actors, including processors, government officials, leaders of cashew associations, and financial institution officers, stated that an indicator of the LIFFT-Cashew program success will be a series of processing units (even small ones) operating throughout the cashew-growing region.
3. **Maintain Contact and Transparency with RCN Buyers, Including Middlemen, but Understand How the Current Buying System Limits Producers:** While middlemen will not completely disappear, as program components are implemented, producers will gain more bargaining power. We recommend transparency with all levels of the buying system, but particular focus on producers, processors, and other stakeholders involved in building

the regional value chain. Producers are exploited by the system of international buyers and their middlemen who go directly to the villages during the harvest and offer a non-negotiable, low price to the producers for RCN. Producers are aware of the exploitation, but believe they have little choice as they often need cash for immediate expenses. In addition, women's cooperatives in the villages often process both RCN and cashew apple for sale in local markets, and, while a supply of apple is reasonably easy to obtain, the women struggle to acquire enough RCN to process because they cannot match the price paid by middlemen to the producers. Therefore, they are left with limited means of acquiring RCN for their needs, and may directly compete with the men in the village, and possibly in their families for the purchase of RCN. As the LIFFT-Cashew program is implemented and both producers and women's cooperatives have more access to resources, they will no longer be forced to compete for the purchase of raw materials. SFL should be aware of the micro-effects that this buyer-seller relationship has on particular villages and families.

4. **Gain a Better Understanding of Youth Cashew Producers:** While Arete engaged with a limited number of youth producers, they appear to have challenges similar to adult and family producers. Further investigation of youth producers as a specific sub-group with its own needs is warranted, however, it may make sense to view youth producers as part of a larger intergenerational category working on kin-tenure land. Arete observed and spoke to youth who participate within an extended family to manage the overall farm, even though some youth described focusing on their own projects, such as one youth who processes cashew for sale to tourists. An example of a youth-driven initiative is COAJQ (Cooperativa Agro-pecuaria de Jovens Quadros) in Guinea-Bissau, a youth-led cooperative that focuses on agricultural production and building capacity and leadership. Additionally, AJAC (Association des Jeunes Agriculteurs de Casamance) focuses on agricultural production by youth in the Casamance region of Senegal.
5. **Consider a Specific Focus on Women in the Cashew Value Chain:** Women were observed to be working throughout the cashew value chain, including those who process the cashew apple, and who work in commercial processing plants and drying and packing facilities. Few women were observed in leadership roles in cashew associations or government. However, many women are processors of the cashew apple, either in formal cooperatives or as part of women's groups in villages. Yet women have unique challenges worth considering, including access to land



*Women workers removing the raw nut from the outer casing at Cajou Casamance.
(Source: Julie Warner, Arete Team)*

ownership and securing RCN for their processing activities.

6. **Consider Workers in Processing, Drying, and Packaging Plants as an Important Part of the Value Chain:** SFL should consider engaging more with the men and women laborers in the processing, drying, and packaging plants. The laborers, particularly in drying and packaging facilities, are often employed on a cash-for-work basis, and by international exporters including Indian and Vietnamese firm. These laborers are also interested in the outcomes of the LIFFT-Cashew program, and how it will benefit them.
7. **Consider Early Focus on the Financial Component in Guinea-Bissau:** Due to the weak banking sector in Guinea-Bissau, an early focus on how to improve access to finance would be wise, especially as the level of cashew production and the quality of RCN are high. Value chain actors, particularly producers, commented that they lack trust in banks, and some have lost their money when banks failed. In addition, some commented about issues of safety and security when accessing banks in Guinea-Bissau.
8. **Assist Producers to Better Balance Cash Crops and Subsistence Crops to Avoid Periods of Hunger:** Cashew farmers in the SeGaBi region often face hunger during part of the year between the harvest of cashew and other crops for sale or consumption. While a range of factors impact food insecurity during these periods, SFL should include in the training of “best” agricultural practices, techniques for intercropping subsistence crops with cashew. Any information gained through research related to this topic could easily be shared with producers through intentional farm management trainings.
9. **Engage with Government Actors and Interprofession Organizations Involved in the Cashew Value Chain:** With a view toward building the cashew value chain and increasing economic opportunity in the region, SFL should prioritize building relationships with government and interprofessions in the three countries in an attempt to provide influence for policy, laws, or initiatives that may impact the cashew sector. Generally, SFL should gather information and be aware of the cashew-related activities of these stakeholders in each country and collaborative activities across the three countries. It might be advantageous for SFL to proactively promote policy related to the cashew sector in SeGaBi or ECOWAS more broadly. Appendix D provides key government agencies and interprofession organizations with oversight of or involvement in the cashew sector in each country; SFL should understand the current status, specific focus, and effectiveness of each. A few organizations to start with would be as follows:

Senegal:

- The Ministry of Environment and Sustainable Development, particularly the division of Water and Forests
- FNDASP (Le Fonds National de Développement Agro-Sylvo-Pastoral)
- AJAC (Association des Jeunes Cultivateurs de Casamance)

- CAC (Coopératives Agroalimentaires de la Casamance)
- CRCOA (Cadres Régionaux de Concertation des Opérateurs de l’Anacarde)
- COFAC (Cadre de Concertation des Opérateurs de la Filière Anacarde de la Casamance)

The Gambia:

- Department of Agriculture and the Ministry of Trade
- Cashew Alliance of the Gambia

Guinea-Bissau:

- ANCA (The National Cashew Agency)
- ATC-Caju

SFL has mentioned a plan to conduct a stakeholder mapping exercise, and we concur this would be a worthwhile exercise early in the project, and possibly at later intervals in the project’s life cycle.

10. **Access the Untapped Potential of the Cashew Apple:** Many women process the cashew apple into juice, jam, wine, and other products. Women processors work in women-owned cooperatives, informal women’s groups, and as sole proprietors and in families. Some received initial funding from NGOs to launch their enterprises, but need additional access to finance to maintain or expand their operations, receive training, and market their products. Based on this, we recommend that SFL apply the LIFFT-Cashew components to these women processors as appropriate – such as developing access to finance, capacity building, facilitating buyer-seller relations, etc., alongside other small processors. SFL should further identify and quantify women-owned cooperatives and women’s groups that process the cashew apple, and apply the LIFFT-Cashew project components to these enterprises as appropriate. In addition, while Muslim producers generally discard or give away the cashew apple because of the religious prohibition of producing wine, many are aware of the value of processing the apple into juice and jam, typically done by women. SFL’s engagement with these cashew apple women processors could include identifying and engaging with Muslim producers who have an interest in processing the apple.
11. **Build a Knowledge Hub Related to Cashew Farming in the Region:** This program includes a component to build a scalable database platform. However, SFL should also consider continuous formation of learning networks related to cashew:
 - a. Communicate with stakeholders along the value chain and with government in each country. Look for ways to collaborate or support effective initiatives;
 - b. Monitor value chain organizations and government for changes in activities and policy; for collaborations between value chain organizations, or between organizations

- and government in each country; and for collaborations between governments across all 3 countries and with other countries;
- c. Seek partnerships with 1-3 research institutions in the region who are working on cashew and consider collaboration on knowledge generation related to training and production;
 - d. Maintain a database or library of information gathered over the course of the program for the purpose of understanding what works and what does not work in building the cashew value chain. This would be a model of “best practices” as learned by SFL that could be available to various stakeholders in the value chain.
- 12. Work Initially with Producer and Processing Cooperatives to Coordinate the Design and Selection of Cashew Storage Units:** Based on our data (Figures 16, 17, and 18), we recommend that SFL focus on the departments where the average production volume is the highest, namely, in order of importance and per country: the departments of Sedhiou, Bignona, Oussouye, and Ziguinchor for Senegal; the districts of Kumbo Central and Lower Niuma for Gambia; and the sectors of Bula, Cachungo, Farim, Mansaba, and Bissora for Guinea-Bissau. Yet, we do not have data about the best design or selection of the cashew storage units. Thus, we recommend that SFL coordinate with producer and processing cooperatives to better understand the best places, and the best designs, to build cashew storage units for the benefit of the producers, and the larger value chain.
- 13. Learn More About Norms of Land Tenure and Gender Relations in the SeGaBi Context:** During the baseline fieldwork, Arete team members realized that there was much going on ‘below the surface’ related to context of land ownership, gender, and household economics that our assessment questions did not fully uncover. Thus, we recommend that SFL learn more about the context such as the norms of land tenure and property ownership, including how families can access credit/loans based on the current system of land ownership (for example, whether families possess actual title deeds to their land, and how this relates, or not, to the possibility of acquiring credits/loans), gendered relations, and the sharing of economic obligation within families. This would be best done through ethnographic, and more generally, qualitative research, and would aid in developing a programmatic design that is well suited for the context, particularly if SFL plans to emphasize women or youth producers in its program as well as providing contextual insight to be used for future M&E.
- 14. As Part of Training Producers in Agricultural Knowledge, Consider How to Form Norms, Infrastructure, and Practices to Reduce Stealing of RCN:** The price that producers receive for RCN has increased in the last several years, thus, creating an incentive for others to steal directly from the farms. Producers are obligated to divert scarce personal resources to control this problem. Many do not leave any RCN in the fields for fear of theft. Therefore, during the harvest, producers gather up the RCN and transport it

to their homes for storage. They also spend as much time as possible in the fields to discourage theft. However, in spite of their efforts, the theft persists. Many producers stated that deterrents such as fencing around their fields and improving the spacing of cashew trees would help mitigate the problem. Villagers talked about informing one another about theft and working communally to prevent it. One village formed a commission to punish those caught stealing, and members of the village have noted that they have since experienced a decrease in theft of RCN.

15. **Assist with Website Development for Enterprises and Associations:** 81% of enterprises surveyed did not have a website; the LIFFT-Cashew program could provide potential resources to create websites as an important linkage between cashew-related enterprises and potential markets.
16. **Consider New Methods to Communicate Market Information to Producers and Train Producers to Wisely Handle the Information:** Most producers interviewed by Arete expressed desire for better information about the price of RCN. Those we talked to who had used SMS, for example through the IRD project, appreciated its ease and simplicity of use, though some were dissatisfied with having to pay to access the service. Charging for the information, even if a nominal amount, would have to be carefully considered if applying an SMS service in the future. At the same time, some producers in Senegal and Guinea-Bissau, for example, mentioned that the SMS service led them to store the cashew awaiting a better price that in the end did not come. And, due to poor post-harvest handling and storage practices, in the end some lost a portion of their produce. The communication of market information, and more importantly, training producers to wisely handle this information should be an important part of the implementation of the program.
17. **Use Producer Reported Figures for Baseline Indicators:** While calculated figures for baseline indicators, such as value of RCN produced and sold, are valuable, we recommend that SFL use producer reported figures as they represent the most accurate values. Calculated figures helped to provide objective comparable figures in terms of importance of production by locality, gender and type of product. However, based on knowledge gained during the fieldwork, most RCN is sold during May and June when the prices are best (before the start of the rainy season), and this could help explain the difference between calculated and reported figures. In general, using reported figures allows SFL to avoid the effect of price fluctuation on the actual value of the revenue. Moreover, given that most of the production is likely to be sold at the higher price, the calculated figures clearly underestimate the figure. Even if reported figures are imprecise because producers may not keep formal accounts typically, it is likely that the calculated figures underestimate the actual value of the sales. During the midline and endline evaluations, the team should consider directly asking producers the price at which most of their production was sold.
18. **Better Define CMAs versus Trade Associations for Future M&E Work:** CMAs refer

to cooperatives and other associations that producers form for the purpose of selling RCN for the best price. Trade Associations are existing organizations that focus on marketing, trade, and advocacy across the sector. Thus, for M&E purposes, we recommend that SFL clarify the function of each.

- 19. Cash for Work Survey Implementation:** Arete prepared a Cash for Work (CFW) Laborers survey for SFL to use after the CFW aspect of the program is implemented. We recommend that SFL implement the survey after employing CFW laborers for different intervals of time, such as 3 months, 6 months, 12 months, 18 months, etc., in order to understand any changes over time that the CFW program might produce for the workers. Additionally, we recommend that SFL try to follow one group of CFW laborers over time to understand emerging changes, and a second group of laborers to use as a more general performance evaluation of the CFW program. It is important to survey CFW laborers throughout each country as well as indifferent regions of each country. Considering disaggregations by gender, ethnicity, or residence might produce interesting information concerning the impact of the CFW aspect of the program. Finally, SFL should feel free to revise the survey as needed as the project is implemented.

- 20. Consider Past and Current Initiatives as Models for the Development of Producer Training Programs:** The LIFFT-Cashew program proposes to create demonstration plots to instruct producers in best agricultural practices. Current and past capacity building initiatives, such as the following, contain potentially useful resources and knowledge:
- Farmer Field Schools, The Gambia – funded by IRD, but no longer active. The Field Schools retain curricula and training materials that may be of use in new initiatives.
 - SME fund, The Gambia – funded through the government of The Gambia and focusing on providing loans to producers and other entrepreneurs in the sector. The program includes extensive training and mentoring in the business of agriculture.
 - Farmer clubs, Guinea-Bissau – a project of ADPP (Ajuda de Desenvolvimento de Povo para Povo) that builds capacity of producers related to cashew production.

USDA LEARNING QUESTIONS

The USDA priority learning questions are an important part of framing the learning that could emerge from this program in order to develop concepts, practices, and themes that have relevance for projects with similar themes and goals. For the baseline assessment, Arete created tools and gathered foundational data that will allow these questions to be answered to the extent possible by the end of the project. This section provides some useful topics to develop evidence of best practices to contribute to USDA's overall learning agenda, as well as providing the tools to help to answer the relevant questions below.

Learning Agenda Question #1: *What point in a value chain should be targeted and with what type of intervention, in order to have sustainable impact on value creation? What cultural and demographic factors most affect whether a value chain intervention is effective and sustainable?*

The perspective of SFL staff and partners will also be crucial in this process as they use their experienced judgment to share their reflections on the points in the value chain and the cultural and demographic factors that affect this particular value chain in the SeGaBi region. Additionally, the other data collected about producers, processors, and cashew-related enterprises should help to generate learning about facets of the chain and to form wise reflections on the links in the chain in the context related to cultural and demographic factors. Finally, intentionally doing an ethnographic study should help better understand the cultural and demographic factors in a way that few other methods could.

Learning Agenda Question #3: *Which policies enhance value chains and improve enabling environments? What models of collaboration among local and international actors, including donors, private sector partners, academic institutions, and NGOs, are effective in supporting policy change?*

The evaluation in the future should involve interviews with policy experts who can help to better explain the policy environment and provide any details about the ways they think are effective in supporting policy change in support of LIFFT-Cashew's goals. Additionally, in order to answer this question as clearly as possible, SFL should have staff members or partners with a focus on cashew-related policies in SeGaBi, or in the global cashew value chain, who can intelligently reflect on the state of policies at the time as well as what might best enhance the value chain and improve enabling environments. Producers and local government staff are likely to have thoughts about how producers are affected by policies and suggestions about how policies can best be implemented to serve intended beneficiaries. Throughout the project, staff should reflect on models of collaboration that impact policy change. In future evaluations, relevant stakeholders should be asked about such collaborations as well.

Learning Agenda Question #4: *How can improved roads and post-harvest storage help in value creation to expand trade and markets?*

Evidence for this learning question will be gathered through the quasi-experimental design (QED) portion of the evaluation, particularly in relation to improved roads. Additionally, data collection from the producers and enterprises that have benefited from improved post-harvest storage will help to build evidence to answer this question. It might be worthwhile to consider a separate addendum report in the final evaluation focusing on improve roads, based on the QED, that could be published and disseminated to wider audiences beyond the most likely readers of the Final Evaluation report.

Learning Agenda Question #6: *What are the long-term outcomes, both direct and indirect, of interventions related to roads and other key infrastructure components in creating strong market systems?*

Evidence from the QED portion of the evaluation as well as from larger analysis will contribute to this question and impact will be studied throughout the 6-year project. Similar to Question #4 above, it might be worthwhile to consider answering this question in a separate addendum report, within the Final Evaluation and based on the QED data on improving roads. A focused report could potentially be disseminated to wider audiences beyond the most likely readers of the Final Evaluation report.

Learning Agenda Question #14: *To what extent did the Financial Services Component help small and medium sized producers, traders and post-harvest market actors (including processors), who frequently lack collateral, registration and credit history to access loans or other financial instruments to effectively expand their businesses?*

Data for this question will be gathered through the enterprise survey as well as interviews with traders, exporters, processors, and financial institutions. It is important to focus early to understand perceptions of how the Financial Services component of the program may or may not help producers who participate, and to observe changes in collateral and credit access compared to others who did not participate in the financial component of the program.

Learning Agenda Question #18: *What types of market linkages help reduce the obstacles in value chains that hinder agricultural actors from benefiting from existing infrastructure facilities?*

This question should be answered by triangulating data from the producer survey, the enterprise survey, and interviews and focus groups with people along the value chain. Much of this will likely rely on judgments by involved parties or experts in the value chain.

Learning Agenda Question #28: *What are the best methods to improve the post-harvest stage of the value chain, in order to maintain quality and value of crops after the harvest? What aspects of production before harvest, such as ensuring input quality and limiting pest and diseases, are most important to reduce post-harvest losses?*

This question will involve data gathered both in relation to agricultural practices as well as storage practices. The M&E staff and evaluation team in the future should seek to understand from the perspective of producers and agricultural experts, the methods that are used before and after harvest, and to compare these with best practices to improve the pre- and post- harvest work. Data from the producer survey as well as focus groups interviews will be useful in answering this question. Because the QED study will not use multiple treatment and control groups in order to understand different lines of causality, the evaluators will rely on that data that has been collected,

including the perceptions of knowledgeable people to understand the lines of causality and the relative value of each method.

Learning Agenda Question #29: What technologies, infrastructure components, and services need to be accessible for agricultural actors to consistently meet quality standards?

The M&E staff, and evaluation team in the future, should look to those actors who seem to consistently meet quality standards. The team should understand the technologies, infrastructure components and services that contribute to meeting quality standards on a regular basis. A case study approach would allow an examination of those who are exemplars, and would help to understand what methods are being used to meet standards. Key informant interview and focus group protocols will also be helpful to get the information about the components needed to help the agricultural actors to meet the quality standards that work best for the market.

METHODOLOGY AND DATA COLLECTION METHODS

Arete conducted a participatory baseline assessment of the LIFFT-Cashew program using a mixed-methods approach to gather robust quantitative and qualitative data. Baseline data was supported by both a quasi-experimental time series and non-experimental time series design. The quasi-experimental design compared observable differences between cashew producers who will directly benefit from road rehabilitation or construction near their households with those cashew producers who will not have the rehabilitation or construction of roads near their households. The non-experimental design was used to assess the impact on both producers and other program beneficiaries. The mixed-method design enabled the Arete Team to facilitate constant comparison between data sources, provide space for new insights to emerge, and most importantly, triangulate data in order to strengthen interpretation of the data. The Arete Team conducted household cashew producer surveys, enterprise surveys, focus group discussions (FGDs), key informant interviews, and document reviews to gather baseline quantitative and qualitative data.

The first phase of fieldwork for the baseline evaluation took place from 25 February 2018 to 11 April 2018 in the SeGaBi region. The fieldwork was conducted by five Arete Team members and 27 enumerators in Senegal, The Gambia, and Guinea-Bissau. Arete collected data from 1,241 cashew producers using a household survey; 26 cashew-related enterprises using an enterprise survey; 58 key informants (from financial institutions, government, community organizations, SFL and USDA, and cashew-related enterprises) using interview protocols; and 23 groups of producers, processing cooperatives members, and potential cash-for-work laborers using focus group protocols. See Appendix E for Methodology and Data Collection Methods, Appendix K for the household cashew producer survey, Appendix L for the enterprise survey, Appendix Q through U for key informant interview protocols, and Appendix N through P for focus group protocols.

PROGRAM THEORY

According to the SFL's M&E Plan, the goal of the LIFFT-Cashew program is "to develop and upgrade value chain linkages necessary to support an integrated regional trade network for the cashew value chain."² The program will address this goal through five components: (1) market infrastructure, (2) financial services, (3) market access and linkages, and (4) on-farm practices. In addition, a cross-functional activity (5) will involve the creation of a scalable database platform for the storage and management of various information systems that the project will engage in and for important market information to share with stakeholders. Each component is further expressed through a series of activities related to specific strategic objectives and indicators for the program. The three core factors of the program and their accompanying indicators and activities are as follows:

1. Expand Trade and Processing Infrastructure

Indicators:

- 1.1.1 FFPr Standard Indicator #13: Value of Sales of Project Beneficiaries
- 1.1.2 FFPr Standard Indicator #14: Volume of Commodities Sold by Project Beneficiaries
- 1.1.3 SFL Custom Indicator #3: Change in RCN Farm-gate Price Received by Beneficiary Producers

Activities:

- 1.2.1 Activity 1: Infrastructure: Feeder and Connector Roads
- 1.2.2 Activity 2: Infrastructure: Post-Harvest Handling and Storage
- 1.2.3 Activity 4: Financial Services: Cashew Fund

2. Form Linkages/Relationships in the Value Chain

Indicators:

- 2.1.1 SFL Custom Indicator #11: Number of New Buyer Seller Relationships Established as a Result of USDA Assistance
- 2.1.2 SFL Custom Indicator #12: Number of Industry Certifications Achieved by Processors as a Result of USDA Assistance

Activities:

- 2.2.1 Activity 3: Financial Services: Facilitate Agricultural Lending
- 2.2.2 Activity 5: Capacity Building: Cashew Marketing Associations
- 2.2.3 Activity 6: Market Access: Facilitate Buyer-Seller Relationships

² Shelter For Life International, Monitoring and Evaluation Plan: LIFFT-Cashew-SeGaBi Region, December 2017.

2.2.4 Activity 7: Capacity Building: Trade Associations

2.2.5 Activity 9: Management of Information Systems

3. Increase Cashew Productivity and Value

Indicators:

3.1.1 FFPr Standard Indicator #1: Number of Hectares of Land Under Improved Techniques or Technologies as a Result of USDA Assistance

3.1.2 FFPr Standard Indicator #2: Number of Individuals Who Have Applied New Techniques or Technologies as a Result of USDA Assistance

3.1.3 FFPr Standard Indicator #3: Number of Individuals Who Have Applied Improved Farm Management Practices as a Result of USDA Assistance

3.1.4 FFPr Standard Indicator #7: Number of Private Enterprises, Producers' Organizations, Water Users Associations, Women's Groups, Trade and Business Associations, and Community Based Organizations (CBOs) that Applied Improved Techniques and Technologies as a Result of USDA Assistance

Activities:

3.2.1 Activity 8: Agricultural Development: Demonstration Plot and Nurseries

The QED portion of the evaluation will provide data to answer the following question: *To what extent can rehabilitated feeder roads increase the production value and balance the bargaining power between stakeholders of the cashew market?*

This question brings together the core factors of this program in order to understand how specifically the road rehabilitation and construction aspect of Expand Trade and Processing Infrastructure could be a stepping-stone to achieve program goals. The program theory is as follows: Better roads directly improve access to farms and villages, thus facilitating increased transactions between producers and markets. Due to the efficiency of better roads, better inputs, such as extension services, new seedlings, etc., will more easily reach producers and processors. Additionally, production improved by better inputs is more easily transported on better roads to a potentially larger choice of markets, including local processors, thus better outputs can be sent by the farmers and processors. This should allow producers to gain increased bargaining power, processors more and improved quality RCN and related products and, based on better outputs, financial institutions would incur less risk to provide services to producers. Therefore, according to SFL's theory of change, roads can help producers and possibly local processors to access a better price, even if roads in and of themselves have a limited direct impact on the amount of production.

DATA ANALYSIS

This section discusses key results of the baseline evaluation. First, this section presents the results from the Propensity Score Matching (PSM). Second, the results of the baseline performance indicators for producers are provided. Finally, the results are broken down by the themes, indicators, and activities of the project. Results from the household cashew producer survey, enterprise survey, key informant interviews, and FGDs are presented under the various project themes, indicators, and activities.

PROPENSITY SCORE MATCHING

Propensity Score Matching (PSM) was chosen to build a control group of cashew farmers that matches a treatment group and to estimate the baseline average treatment effect. PSM pairs treated and untreated observations on the estimated probability of being treated represented by the propensity scores. To build the propensity scores and identify treatment matches in the comparison group, a set of variables was considered to ensure that individuals in each of the two groups selected will be similar on those variables. The variables are: (1) total area of land owned, (2) age, (3) level of education, (4) number of inhabitants in the household, (5) number of children, (6) source of lighting in the household, (7) proximity of the town (as a proxy for access to markets), (8) proximity of the principal cashew farm, and (9) index of livestock wealth. The propensity score is defined as the conditional probability of treatment given the set of variables:

$$P(X) = \Pr(T = 1|X)$$

- Where T represents the treatment with a binary outcome: T= 0 (absence of treatment) and T = 1 (presence of treatment).
- X represents the nine considered background variables

A comparison of the means of these nine covariates between the treatment and the control group shows no important difference in the means. This suggests a non-negligible similarity between the two groups. The potential to match each individual in the treatment group with an individual in the control group is then very high.

Regarding the selling prices, we did find a significant difference of 50 FCFA (about \$0.10) between the selling price of the treatment and control groups. In fact, the control group is selling on average at a better price of more than 50 FCFA compared to the treatment, confirming our expectations. Because the two groups were not randomly selected, and the choice of the treatment group (the villages that will benefit from the road rehabilitation) may be linked by the fact that those villages have the greatest need for intervention, the difference between selling price was

expected. Out of the four matching methods we used, three methods yielded 452 producers from the comparison group of 458 who found a match in the treatment group. That means that every individual in the treatment group had at least one match in the control group (see Appendix X and Appendix EE for more details on the PSM method and econometric model used in this assessment).

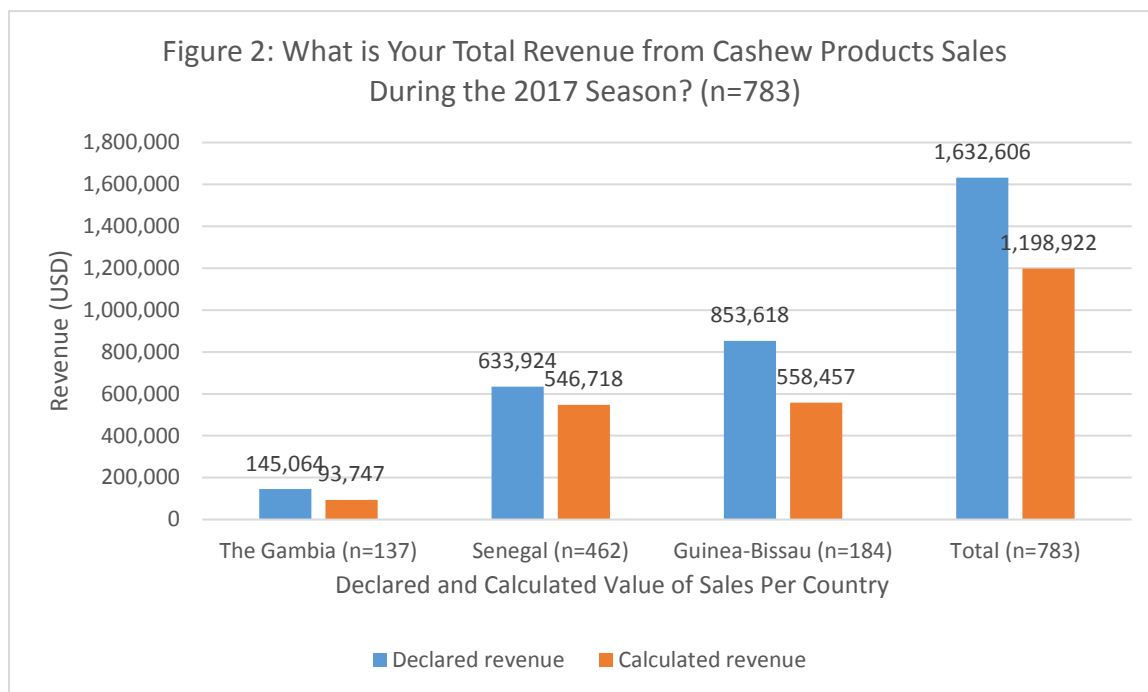
BASELINE PERFORMANCE INDICATORS FOR PRODUCERS

To calculate the indicators related to revenue, we first calculated the values in FCFA for all the countries before proceeding to a conversion in USD. Since the survey concerned the cashew season of 2017 (the season is six months long in general, from April to September), we focused on gathering information about 2017 only. Also, with the knowledge that the sales are more important before the first rains, namely between April and June, we considered the mean exchange rate of that trimester for the purposes of a monetary conversion rate based on the website records of the OANDA Corporation.³ Based on OANDA data, we used a conversion rate of 596.29 FCFA per 1 USD.

Value of sales of project beneficiaries (Standard #13)

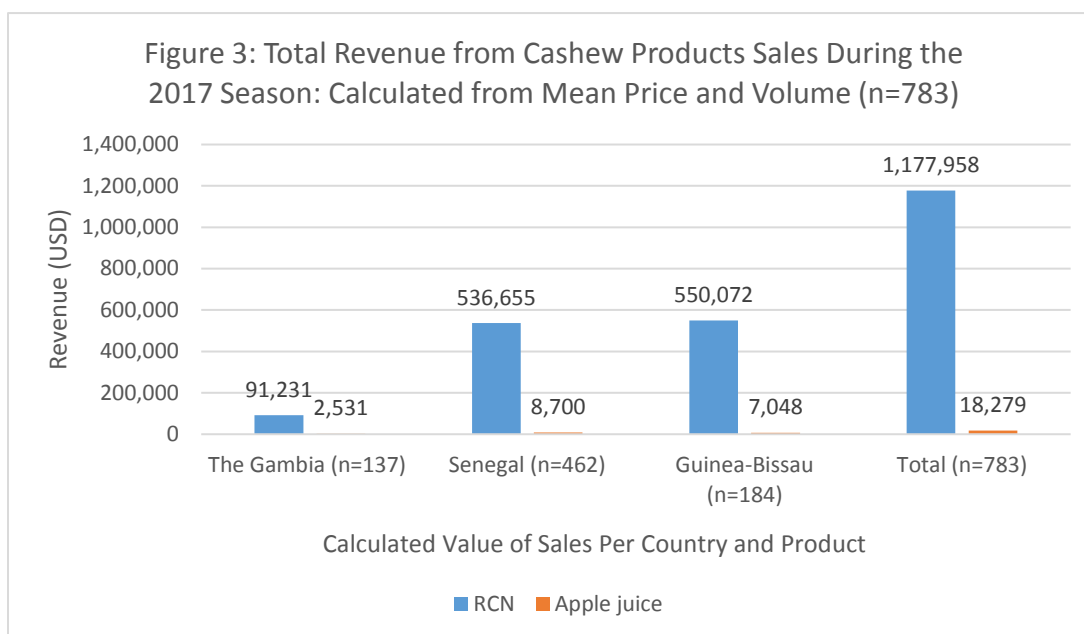
According to Figure 2, the total reported income by all producers surveyed for the sale of RCN is 633,924 USD for Senegal, 853,618 USD for Guinea-Bissau and 145,064 USD for The Gambia (See Figure 2 below). Next to the declared income, the calculated income was obtained by taking the product between the average price and the total volume sold. There are significant differences between the two indicators. This could be explained by the fact that producers tend to sell when prices are high. In this case, the average would underestimate the total income of producers or possibly estimation errors by the farmers themselves. The calculated incomes are: 546,718 USD for Senegal, 558,457 USD for Guinea-Bissau and 93,747 USD for The Gambia. There is a larger discrepancy between the declared revenue value and the calculated revenue value in Guinea-Bissau than in Senegal and The Gambia. The reason for this might be investigated through case studies in the course of the project.

³www.oanda.com



* Declared and calculated revenue of potential beneficiaries (control or Treatment B excluded) per country.

Below in Figure 3, the calculated income is disaggregated by product type: RCN and cashew apple juice. Most of the production is sold as RCN in all countries. In each country, revenue from the sale of RCN represents more than 95% of total revenue, in comparison to cashew apple juice. This proportion is equal to 97.3% in The Gambia, 98.4% in Senegal, and 98.7% in Guinea-Bissau.

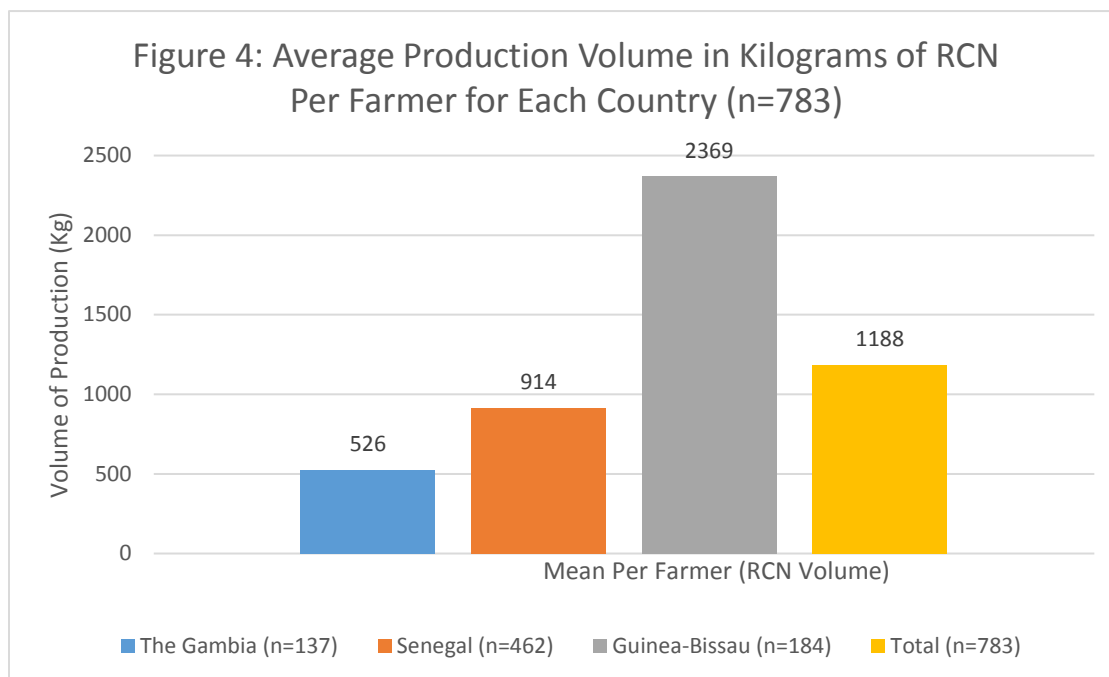


* Declared and calculated revenue per product for potential beneficiaries (control or treatment B excluded).

Volume of commodities sold by project beneficiaries (Standard #14)

The average⁴ volume of production revealed some disparities between countries. In Senegal and Guinea-Bissau, the average production volume per producer is 914 kg and 2,369 kg respectively, while in The Gambia, the average volume is only 526 kg. The average of all three countries is 1,188 kilograms per farmer (See Figure 4).

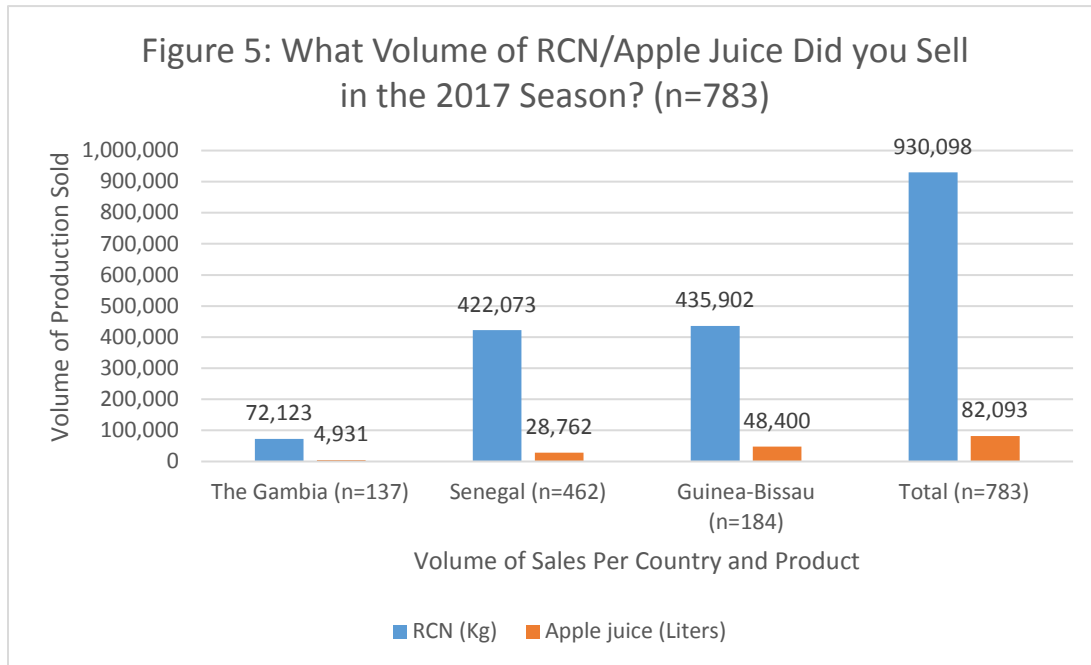
⁴ For the purposes of this report, we use ‘mean’ and ‘average’ synonymously in the common usage of the two terms, sum of values divided by the total number of values.



Producers were unable to accurately describe the amount of cashew apple they produced, and more specifically, the amount of cashew apple juice (CAJ). Some gave values in terms of liters of juice and others in terms of kilograms of apple. However, producers were generally only able to provide an estimate for kilograms of cashew apple produced. For all of these reasons, we considered the calculation of the FFPr indicator #14 using the production sold instead of the total production.

“A lot of the cashew apple goes to waste. The farmers don’t know what to do with it. Cashew juice has a lot of potential” (Cashew value chain organization, The Gambia).

According to Figure 5, for the production sold, the total volume is 930,098 kg of RCN and 82,093 liters of cashew apple juice. Most of the production was in Guinea-Bissau (435,902 kg) and Senegal (422,073 kg). However, for the calculation of FFPr indicator #14, we propose not to use the total production volume that includes post-harvest loss, but instead to use only the production sold. This is due to the limited estimate for total production including post-harvest loss. Producers often use their production to pay for services they receive before they begin selling. For example, we found that producers pay workers by allowing them to keep a portion of the harvest for themselves.



* Volume of production sold for potential beneficiaries (control or Treatment B excluded).⁵

Selling price varies by product and country of origin. The average RCN price during the 2017 cashew season is estimated at 768.64 FCFA per kg in Senegal, 749.92 FCFA per kg in The Gambia and 750 FCFA per kg in Guinea-Bissau (See Table 1 below for values in USD). The average price of CAJ in 2017 is estimated at 223.55 FCFA per liter in Senegal, 97.424 FCFA per liter in Guinea-Bissau and 281.08 FCFA per liter in The Gambia. Table 1 provides the average selling prices in USD for RCN and CAJ per country. Senegal has the highest selling price, while Guinea-Bissau records the highest production volume per producer.

⁵ A point to note, based on the PADEC study for Senegal (Le Secteur De L'AnacardeAu Senegal, May 2016), the national average production of RCN was 150,000 tons produced by 22,550 households. Using these numbers, based on our respondents, we captured about 0.3 percent of the national production (422 tons/150,000 tons) and we talked to approximately 2 percent of the Senegalese cashew producing households (462 households/22,550 households).

Table 1: Mean Production Volumes, Prices, and Income for Each Country

	Senegal	Guinea-Bissau	The Gambia
	Raw Cashew Nuts		
Mean of lowest prices (in USD)	0.86	0.84	0.91
Mean of highest price (in USD)	1.71	1.68	1.60
Final mean price in (USD)	1.29	1.26	1.28
Mean production volume (in kg)	913.58	2,369.03	526.45
Mean declared income ⁶ (in USD)	1,372.86	4,694.90	981.10
Mean calculated income (in USD)	1,162.96	2,993.54	666.38
	Cashew Apple Juice		
Mean of lowest price (in USD)	0.27	0.14	0.47
Mean of highest price (in USD)	0.48	0.18	0.47
Final mean price (in USD)	0.37	0.16	0.47
Mean production volume (in liters)	73.69	263.04	35.99
Mean calculated income (in USD)	164.16	227.38	253.11

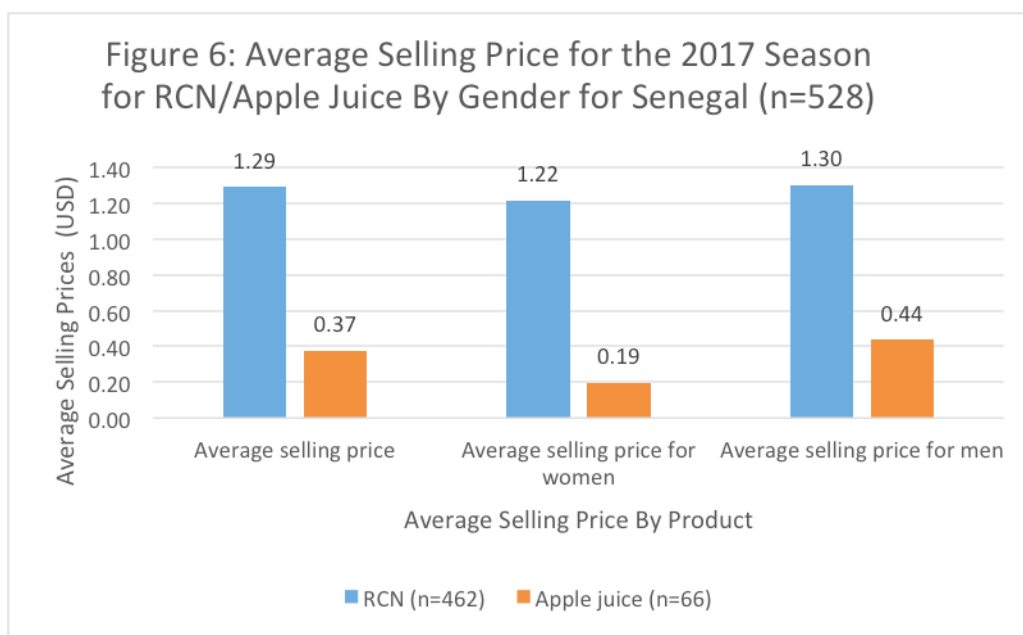
Change in RCN farm-gate price received by beneficiary producers (Custom indicator #3)

Figures 6, 7, and 8 below show the difference in the mean selling price for men and women. The difference is seen mainly in Senegal and The Gambia, while the price is almost the same for men and women in Guinea-Bissau. In Senegal, the difference favors men regardless of the product. In Senegal, women sell RCN at 1.22 USD per kilogram on average, while men trade the same product at 1.30 USD.⁷ This gap is also observed for CAJ, that women sell at 0.19 USD while men sell at 0.44 USD per liter on average. In The Gambia, women sell RCN for a higher price than men (1.34

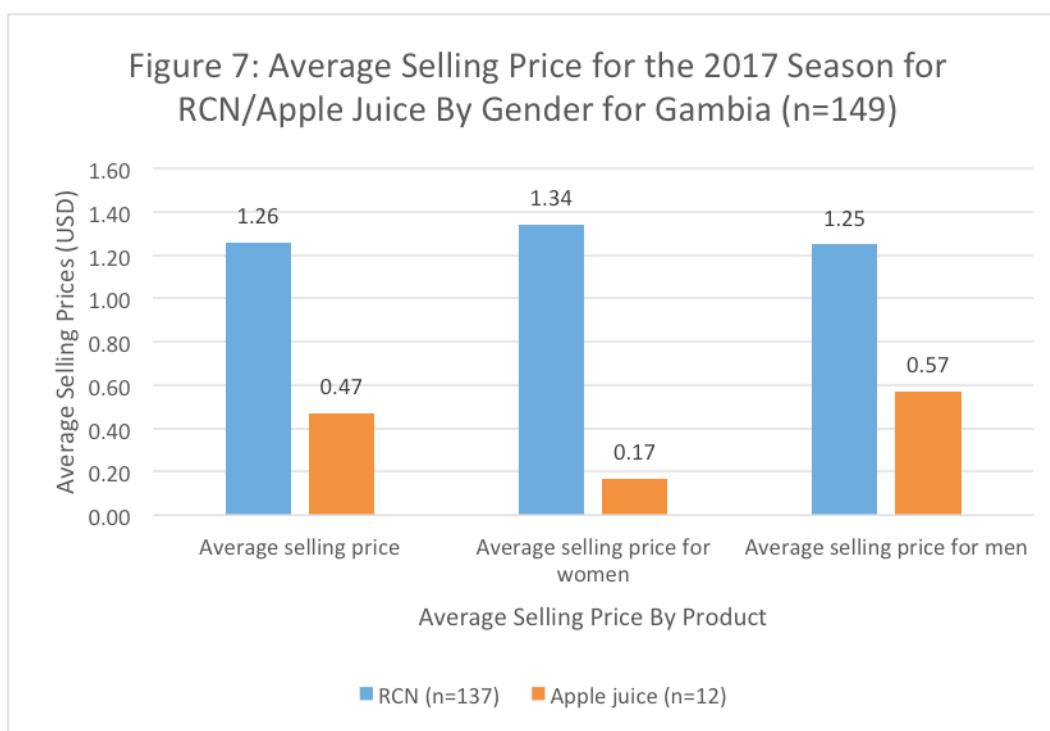
⁶There are not separated questions differentiating between RCN and cashew apple for the declared income. However, since more than 95% of the farmers surveyed in all countries are not producing apple juice, we just separate the income of farmers who produce RCN only from farmers who produce the both product to get an idea about the declared revenue from RCN sales.

⁷ From our producer survey, all of the interviewed women, except for two, are farmers who own their own farms or at least have an area in their plantation dedicated to cashew, so they should be harvesting themselves their production, at least part of the time, depending the particular norms and habits they might have in farming. In example, it seems to be a somewhat common practice in the Casamance region, for example, to share plantations where one member of the family may keep the harvest from one day, another for another day, etc. even if they all work together; thus a woman who owned land may be giving some of the production to another person in her kin-network, or maybe more accurately, they may be sharing the land, though she might be the formal legal owner, and the woman may only get a portion of the total land's production overall based on the pattern of sharing they might employ; this may be the same for men.

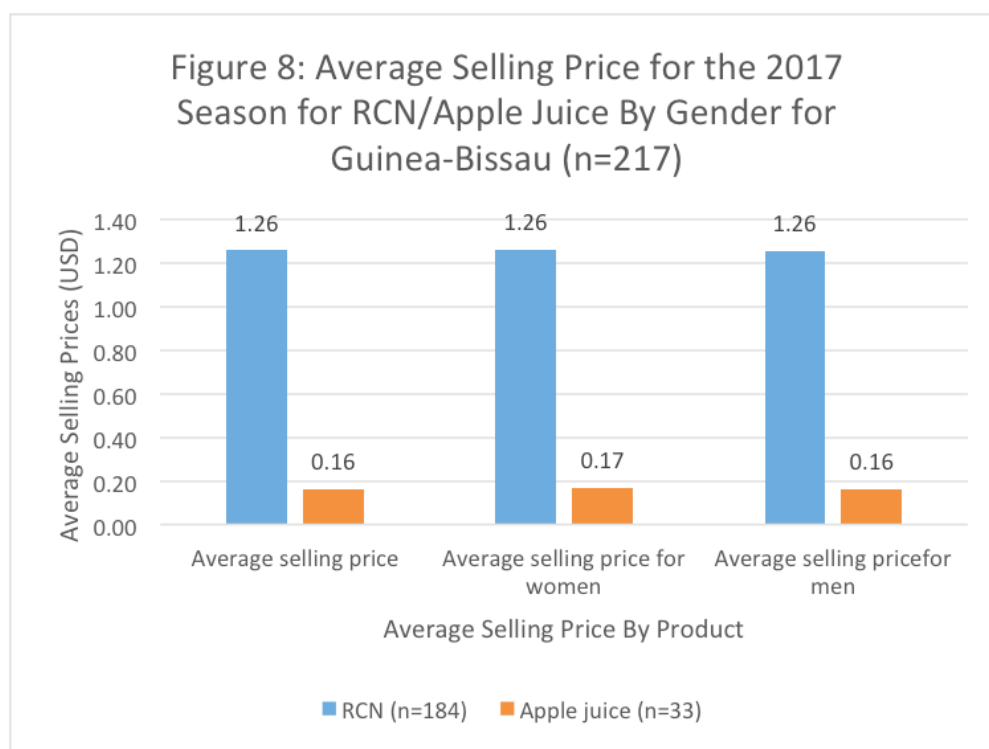
USD vs 1.25 USD, respectively) and CAJ for a lower price than men (0.17 USD vs. 0.57 USD, respectively).



*Average farm-gate selling prices of potential beneficiaries (control or treatment B excluded) per gender.



*Average farm-gate selling prices of potential beneficiaries (control or treatment B excluded) per gender.



*Average farm-gate selling prices of potential beneficiaries (control or treatment B excluded) per gender.

Number of individuals who have applied new technologies as a result of USDA assistance (Standard #2)

The baseline value of individuals who applied new technologies as a result of USDA assistance is zero prior to program implementation. However, the evaluation team collected data from producers indicating at baseline whether they practice “new farming techniques to improve [cashew] productivity”, and which techniques are the most common. This data will provide SFL with an understanding of what is currently occurring among the surveyed producers.

The survey asked producers about pre-flowering practices (including cleaning and pruning), how new trees are added, and the spacing between them (See Table 2). Producer responses indicate that “pruning” is practiced by the majority of producers in each country. Over 25% of producers in each country clean the plantation.

The majority of producers in each country use their own seeds to add new trees. Producers were asked if they practice regular spacing of trees, and which protocol they use: 15 m x 15 m, 10 m x 10 m, or 5 m x 5 m. Approximately 35% of producers in each country reported that they practice regular spacing, most commonly 10 m x 10 m or 5 m x 5 m. The 15 m x 15 m protocol is practiced

by about 12% of producers in Senegal and The Gambia, and by 7.14% of producers in Guinea Bissau (See Table 2).

Table 2: Number of Individuals Practicing “Best” Agricultural Techniques Per Country

	Senegal		The Gambia		Guinea-Bissau	
	Number of producers from total surveyed	Percent (%) of total surveyed producers	Number of producers from total surveyed	Percent (%) of total surveyed producers	Number of producers from total surveyed	Percent (%) of total surveyed producers
Pre-flowering practices						
Cleaning	468	37.93%	74	29.25%	118	39.07%
Grafting	8	0.65%	0	0%	1	0.33%
Pruning	754	61.10%	115	45.45%	181	59.93%
De-topping	2	0.16%	44	17.39%	2	0.66%
None	2	0.16%	16	6.32%	0	0%
Others	0	0%	4	1.58%	0	0%
How new trees are added in the plantation						
Ownseeds	855	84.73%	135	95.07%	183	81.33%
Grafted	6	0.59%	1	0.70%	1	0.44%
Nursery (purchase)	43	4.26%	2	1.41%	1	0.44%
Nursery (gift)	84	8.33%	3	2.12%	35	15.55%
Other sources	21	2.08%	1	0.70%	5	2.22%
Spacing between trees						
Regular spacing	567	37.45%	78	35.78%	102	34.69%
15 x 15 meters	178	11.76%	27	12.39%	21	7.14%
10 x 10 meters	447	29.52%	63	28.90%	97	32.99%
5 x 5 meters	322	21.27%	50	22.94%	74	25.17%

*Respondents can select multiple responses.

Number of hectares of land under improved techniques or technologies as a result of USDA assistance (Standard #1)

While the baseline indicator value for hectares under improved technologies would be zero, Table 3 describes the total land area on which producers reported to use new farming techniques as of the time of the survey: 400 hectares (16.59%) in Senegal, 100 hectares (13.58%) in Guinea-Bissau, and 31 hectares (22.38%) in The Gambia.

Table 3: Total Area of Land Declared Under Improved New Techniques

	Number of producers from total surveyed	Percent (%) of producers from total surveyed	Hectares	Percent (%) of Total Land with New Techniques per country
Senegal (Total = 2,410 Hectares)	111	12.06%	400	16.59%
Guinea-Bissau (Total = 736 Hectares)	30	16.3%	100	13.58%
The Gambia (Total = 335 Hectares)	31	22.62%	75	22.38%

Table 3 accounts for the subset of producers who declare that they apply any of the best agricultural practices given in Table 2.

Table 2 shows conformity regarding some practices and differences in others. Most producers prefer to use their own seeds instead of purchasing seeds from nursery, while producers show more variation in their use of pruning and cleaning practices. Producers should be asked whether they are already familiar with these practices. Similarly, producers seem to not consider 10 m x 10 m spacing as a new agricultural practice as approximately 30% have adopted this.

Number of individuals who have applied improved farm management practices as result of USDA assistance (Standard #3)

While the baseline indicator value for individuals who applied improved farm management practices would be zero, out of 1,241 producers surveyed, the number who declared to use improved farm management practices unrelated to any USDA assistance is estimated at 114, including 89 out of 920 (9.67%) Senegal, 19 out of 137 (13.86%) in The Gambia, and 6 out of 184 (3.26%) Guinea-Bissau. These results could be due in part to previous agriculture and value chain development projects in Senegal and The Gambia, and a lack of such projects in Guinea-Bissau.

Table 4: Number of Producers Who Have Declared to Practice Improved Farm Management Methods (From Question 192 of the French version of the questionnaire).

Country (n=1,241)	Number of Producers	Percent (%)
Senegal (n=920)	89	9.67%
The Gambia (n=137)	19	13.86%
Guinea-Bissau (n=184)	6	3.26%

BASELINE PERFORMANCE INDICATORS FOR ENTERPRISES

Number of Private Enterprises, Producer Organizations, Water User Associations, Women's Groups, Trade and Business Associations, and Community Based Organizations (CBOs) that Applied Improved Techniques and Technologies as a Result of USDA Assistance (Standard #7)

This baseline indicator starts at a value of zero because the project has not yet been implemented. More information about this indicator can be found in Appendix CC.

Number of Industry Certifications Achieved by Processors as a Result of USDA Assistance (Custom Indicator #12)

This baseline indicator starts at a value of zero because the project has not yet been implemented. More information about certifications that the surveyed enterprises have received thus far prior to USDA Assistance can be found in Appendix H and Appendix CC.

Number of New Buyer-Seller Relationships Established as a Result of USDA Assistance (Custom Indicator #11)

This baseline indicator starts at a value of zero because the project has not yet been implemented. More information about relationships that the surveyed enterprises have formed thus far prior to USDA Assistance can be found in Appendix H and Appendix CC.

RESULTS RELATED TO PROGRAM COMPONENTS

COMPONENT 1: MARKET INFRASTRUCTURE

ACTIVITY 1: INFRASTRUCTURE: FEEDER AND CONNECTOR ROADS

Activity 1 involves the building and rehabilitation of feeder and connector roads, including design and construction of appropriate drainage for each road. This activity is intended to benefit stakeholders across the value chain.

Roads are important to the overall infrastructure of a region, and improving road conditions can have an immediate impact on all sectors, particularly agricultural development. The request for better roads in relation to the transport of cashew, as well as for other reasons, was prominent across the three countries.

Some producers in Senegal stated that they were familiar with the Shelter for Life Senegal Rural Roads (SRR) project, and that the road rehabilitation had made a difference in their area. A trader in Ziguinchor whose large trucks need to get as close to the farms as possible to collect the RCN commented favorably about the rehabilitation project. Additionally, other stakeholders in Ziguinchor mentioned the value of SFL's past road rehabilitation. However, many were not familiar with the SRR project, and commented that roads in their areas are not in good condition, including roads that connect villages to the main highways and smaller roads between villages and fields. Producers and enterprises in Guinea-Bissau and The Gambia also mentioned that many roads were in bad condition and needed to be improved. The smaller roads in the region are often nothing but pathways, and conditions are more difficult during the rainy season. One producer stated that buyers who come to the villages to buy RCN will factor the road conditions into the selling price offered, thus directly impacting the price that producers receive.

Distances between households and nearest road

We considered the transportation of products and the time it takes for producers to access markets from their farms. In addition to gathering perspectives from producers, we attempted to calculate the actual distance between the surveyed producer's household and the nearest road. We combined the GPS data collected during the survey and data from the Digital Chart of the World (DCW) developed by the School of Ocean and Earth Science and Technology (SOEST), University of Hawaii, USA. The Q GIS mapping software makes it possible to measure the distance between a point and several other points while retaining the nearest point. Through a sophisticated procedure that combined DCW data⁸ and the collected GPS coordinates of the households, we calculated the distance between the villages where the surveyed cashew producer lives and the closest primary road, secondary road, track, trunk or unclassified road recorded in the DCW data in that village. As we expect, the descriptive statistics show that the producers are closer to their farms from where they sell their goods than to the town where products could be brought for a higher selling price. In fact, for most producers, the closest town to their village⁹ is "very far" while the time to reach the cashew farm is less than 1 hour.¹⁰ This could help to explain why most are selling their product

⁸ <http://www.soest.hawaii.edu/wessel/dcw/>

⁹ Our data is disaggregated to the village level, and producers generally considered the closest village they would bring their goods to from our experience in data collection.

¹⁰ As a note, in all the countries, based on our survey data, more than 95% of the farmers said that they sell their production at farm gate, and regarding the transportation cost more than 95% of the farmers declared that it costs them nothing to transport their goods because they just transport it by themselves or they simply sell it at farm gate. They defined "close", "far", "very far", etc. based on their perceptions, though we have data that the time is typically less than 1 hour away.

either at the cashew farm or in the village instead of transporting it to the nearest town. The analysis of the calculated distances between households and roads confirmed the negative effect of distance on the selling price as the farther the primary and secondary roads are from the villages, the lower the selling prices seems to be (see Appendix I for more information).

Main roads to reach the nearest town¹¹

Road transport plays an important role in internal mobility and sub-regional trade. At the national level, road transport facilitates the access of the population to basic social services and domestic markets for the sale of products. In Senegal, the road network is estimated at about 14,500 km, of which 4,500 km are paved.¹² Although there are some improvements compared to previous years, considerable efforts remain to be made, especially for the opening up of remote rural areas. The same need exists in Guinea-Bissau and The Gambia.

Data collected from the LIFFT-Cashew producer survey show that, in Senegal there are 41 roads that households use to reach the nearest city. More than half of the households (55%) declared the RN6 to be a regularly used road. The other declared roads vary from one village to another. In The Gambia and Guinea-Bissau, there is more variation in the name of the roads that producers declared to use, thus determining which roads they use is more complicated.

See Figure 9 below detailing the Main Connecting Roads that are the closest to producers' households based on the Digital Chart of the World (DCW). The DCW enabled an assessment of the type of roads that are in proximity to the producers. In general, secondary roads are more proximate to a producer's household. Secondary roads are those that connect the communes (or sectors for Guinea-Bissau) to the main highways, such as the RN6 in the Casamance region.¹³ This does not mean that producers necessarily access the secondary road, but it is likely.¹⁴ Thus, primary roads, which are the national roads, are less proximate in Senegal and Guinea-Bissau. In The

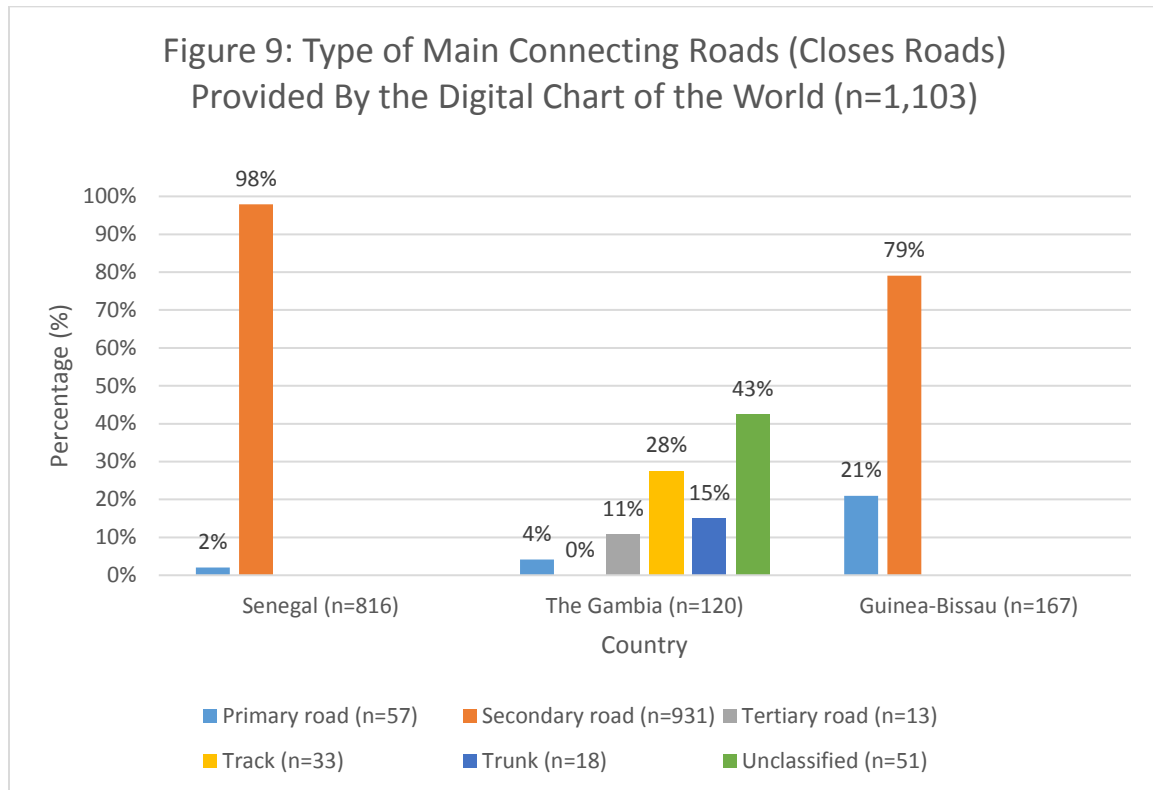
¹¹ The distances to the nearest roads were calculated for every surveyed farmer by using the GPS coordinate collected at the household level. We then aggregated at commune level using the mean distance for all the farmers in the commune.

¹²<http://dlca.logcluster.org/display/public/DLCA/2.3+Senegal+Road+Assessment;jsessionid=A6BC1A333B6EC441F7B4D0E5DF1607BC>

¹³ For details on how we defined the different types of roads please see: https://wiki.openstreetmap.org/wiki/Highway_Tag_Africa and https://wiki.openstreetmap.org/wiki/East_Africa_Tagging_Guidelines

¹⁴ More work would need to be done to determine the level of access to each road beyond a generalization that broadly roads that are more proximate to the habitations of the farmers are likely to be more generally accessed; this is not something that we covered in this baseline assessment.

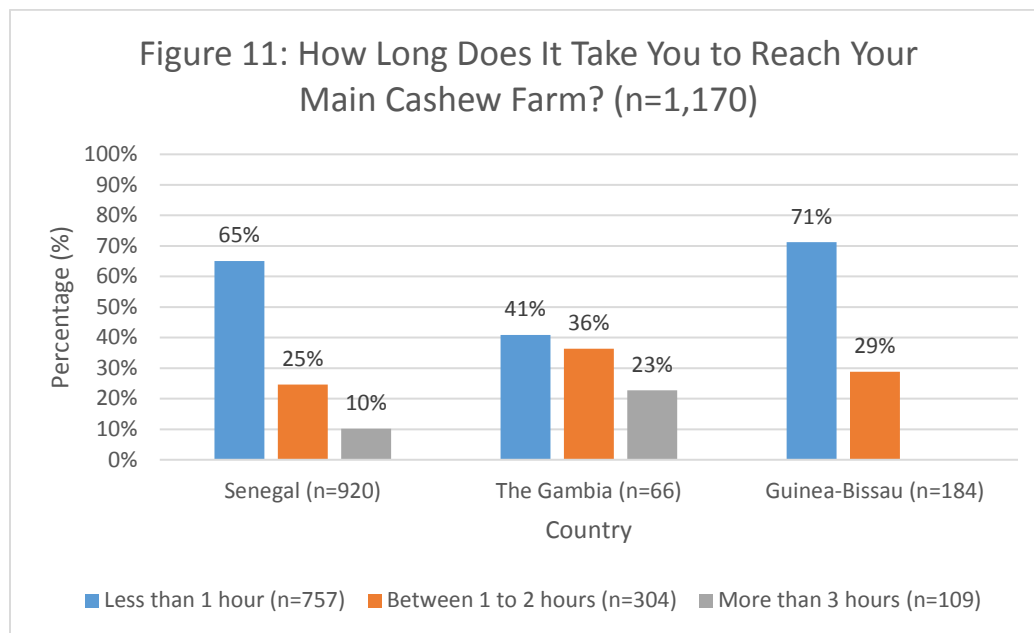
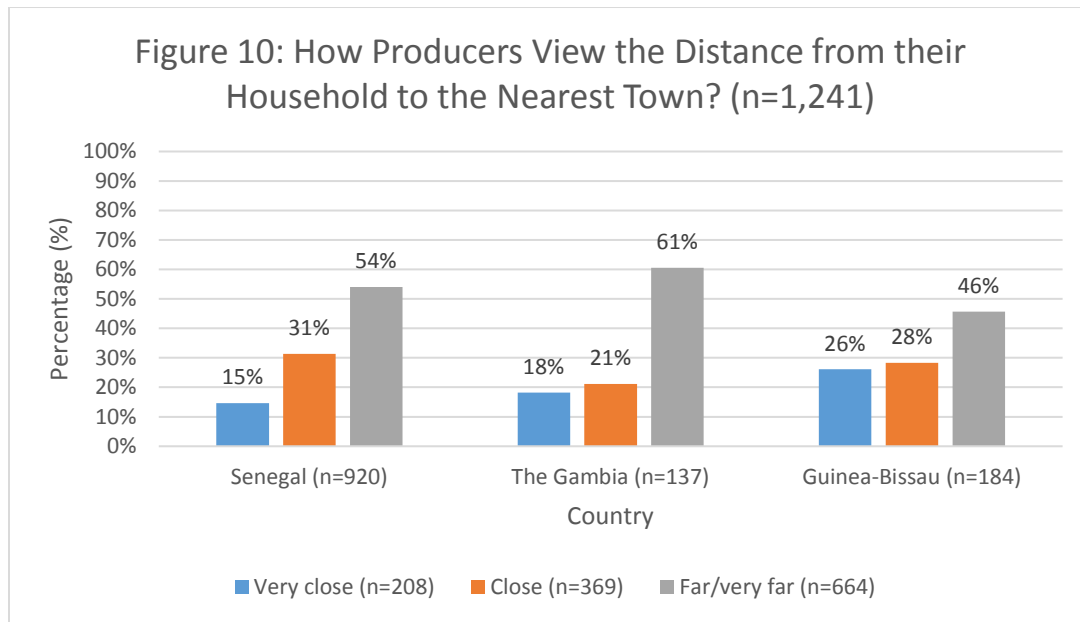
Gambia, some producers have access to the primary roads. Due to the configuration of the county as a long, narrow territory, there is less need of secondary roads, and the distance between villages and primary roads are comparatively short.



The household survey gathered data to understand producers' perspectives of the distance between their household and the nearest town. Overall, 54% of producers in Senegal, 61% in The Gambia, and 46% in Guinea-Bissau perceived that the distance from the nearest town to their household is “far/very far” (See Figure 10). We discovered that this perspective varies according to the main road declared to be used. The distance from the nearest town is farther for producers using the Kolin-Sansamba road in Senegal (43% very far and 31% far) while for those using the Agnack-Boutoupa-Camaracounda and Kougara roads in Senegal, the percentage of producers who view the distance from the nearest town to be “far/very far” is low (See Appendix I for more details).

For most producers, the closest village is perceived as “very far” while the time to reach the cashew farm from the household is less than 1 hour in all three countries (See Figure 10 and Figure 11). That explains why almost all producers are selling their product either at the cashew farm or transporting it to the village to sell, instead of going to the market in the nearest town. Consequently, this results in lower bargaining power for the producers. Based on our interviews

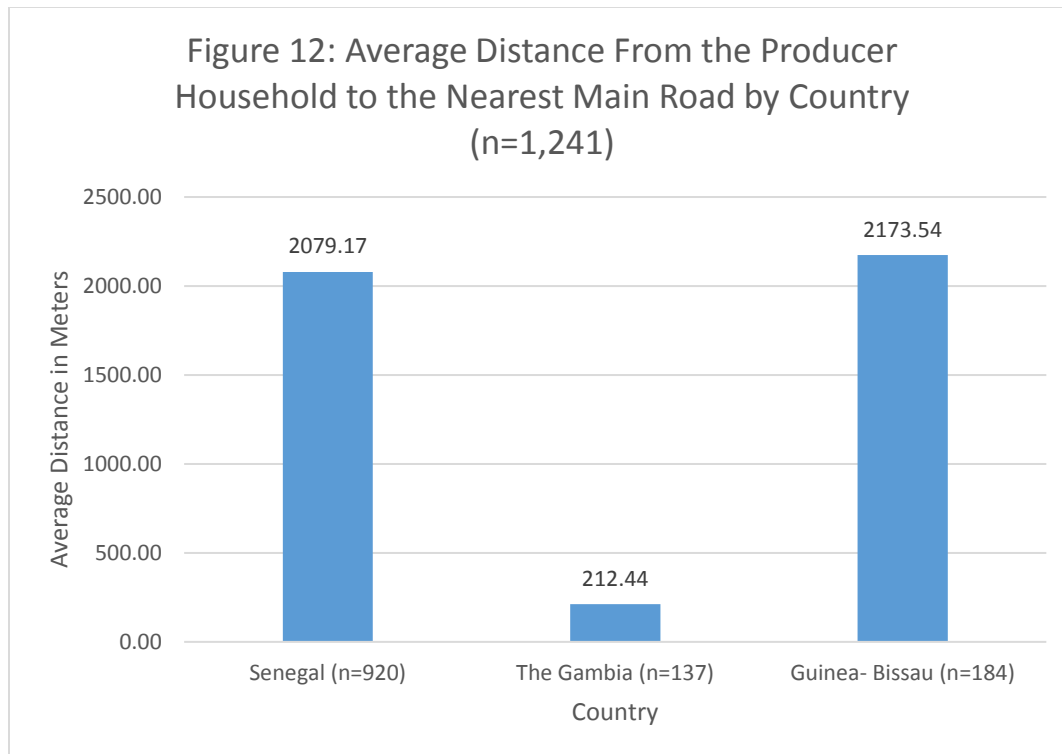
and focus groups, the burden of transportation is transferred to the buyers, thus increasing their power to negotiate a lower price with the producers.



Calculated distance to the nearest road

Figure 12, below shows the average distance from the producer household to the nearest road. In Senegal, households are on average 2.1 kilometers (2,100 meters) from primary roads and 2.3

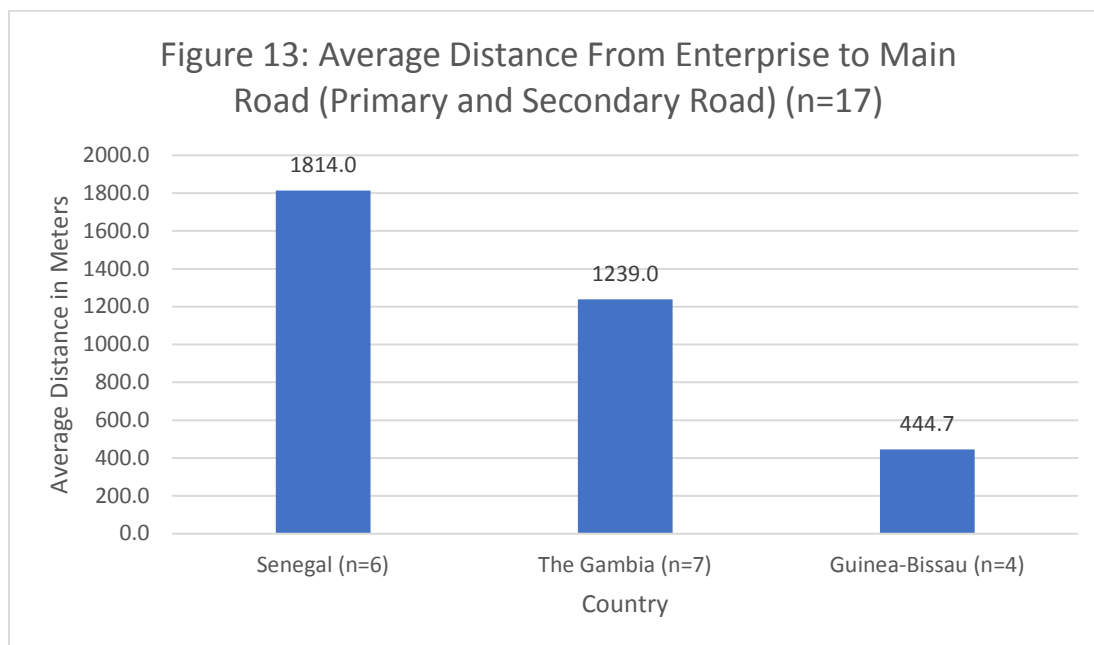
kilometers (2,300 meters) from secondary roads. In The Gambia, producer households are closer to roads likely due to the size of the country and the size of administrative units in the country. For the type of the road considered, the average distance does not exceed 1 kilometer (1,000 meters). In Guinea-Bissau, the average distance calculated between the roads provided in the DCW and the household of the cashew producer is 2 kilometers.



Relationship between calculated distance to the nearest road and average price of RCN

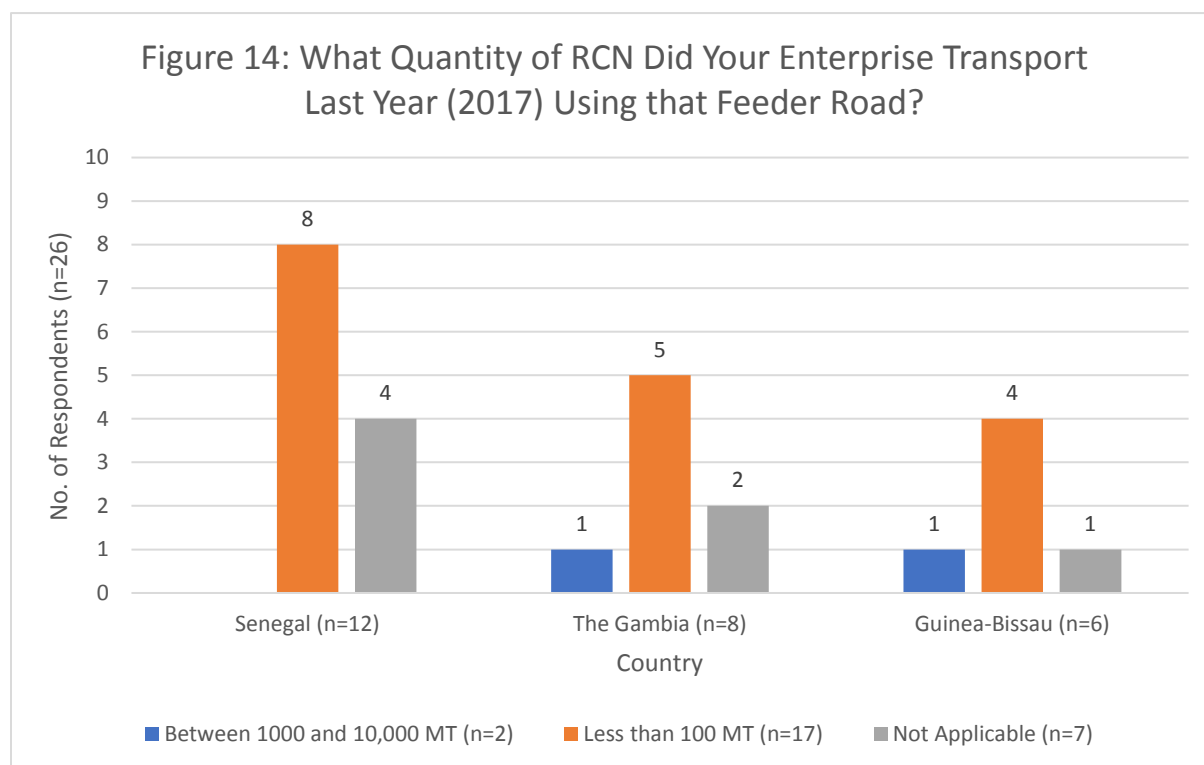
To measure the impact of the distance to the nearest road on the selling price, we used a simple linear regression for each region. The choice to limit the analysis at the regional level stems from the fact that the sample size is too small below the regional level to produce robust results. In Senegal, there is a significant association between distance and price for the regions of Fatick and Ziguinchor at the 10% threshold. In these regions, the increase in distance from the nearest road results in a decrease in the price of one kilogram of cashew nuts. Given the small differences between regions in terms of distance from the nearest road, there is no significant correlation between distance and average kilogram prices except in the Lower River region of The Gambia (see Appendix I for more details).

According to the enterprise survey, Figure 13 below shows that the average distance between processing enterprises and the main road is 1,814 meters in Senegal, 1,239 meters in The Gambia, and 445 meters in Guinea-Bissau. To calculate the distance, we used the GPS location for the enterprise address and the DCW for the primary and secondary road closest to each enterprise.



Quantity transported

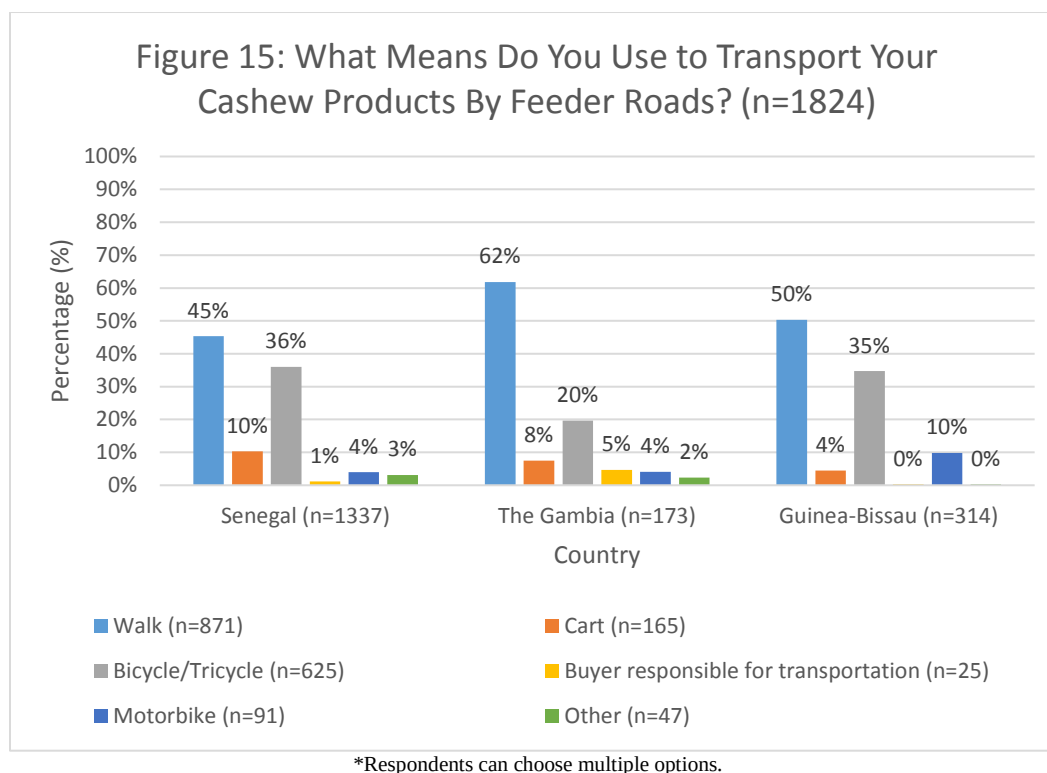
We asked processing enterprises about the quantity of RCN transported using the feeder roads. In The Gambia, 5 enterprises transported less than 100 MT on the feeder road, and one enterprise transported 1,000 to 10,000 MT of RCN. In Guinea-Bissau, four enterprises transported less than 100 MT using the feeder road they mention, and 1 enterprise transported 1,000 to 10,000 MT. In Senegal, 8 of the 12 enterprises surveyed transported less than 100 MT using the feeder road (See Figure 14). Generally, these enterprises process into cashew kernel all the RCN they transported to the factory.



In The Gambia, four enterprises out of eight use the same feeder road to connect them to market and also to transport products (this is because they are in the same region). This means that the market for cashew product for these enterprises is not far. In Guinea-Bissau, two enterprises out of six use the same feeder road to transport their product and to connect them to their main market. It shows that the market for the two enterprises is not far from their locations. In Senegal, almost all enterprises surveyed used the same feeder road for their activities related to the transportation of products and to connect them to the main cashew sales market (See Appendix I for the detailed table).

Based on our data, for the development of the value chain, the transportation burden should be reduced for both producers and middlemen by improving access to transportation and reducing the time it takes to access towns where markets are located. With improved roads, producers could transport their products from the farm directly to markets where traders are located in the same amount of time as transporting the product from the farm to the village, and thus eliminate the middleman. The proximity of the farm to the village in general, explains why most producers are able to transport their product by foot or bicycle: 81% of the producer respondents in Senegal transport their cashew products by foot or bicycle; 82% in The Gambia; and 85% in Guinea-Bissau

(see Figure 15). Below we show details of the methods that producers use to transport RCN and other cashew products from farm to village in each country.



ACTIVITY 2: INFRASTRUCTURE: POST-HARVEST HANDLING AND STORAGE

For the second activity, SFL plans to construct or rehabilitate cashew storage units. The main target beneficiaries for this are the cashew producers and the intended cashew marketing associations (CMAs). While the design and selection of sites will be coordinated with local cashew producers and producing communities based on need, SFL should consider working initially with producer and women processing cooperatives to discern the capacity and design of storage units, and the best locations for the construction of new or rehabilitation of existing units.

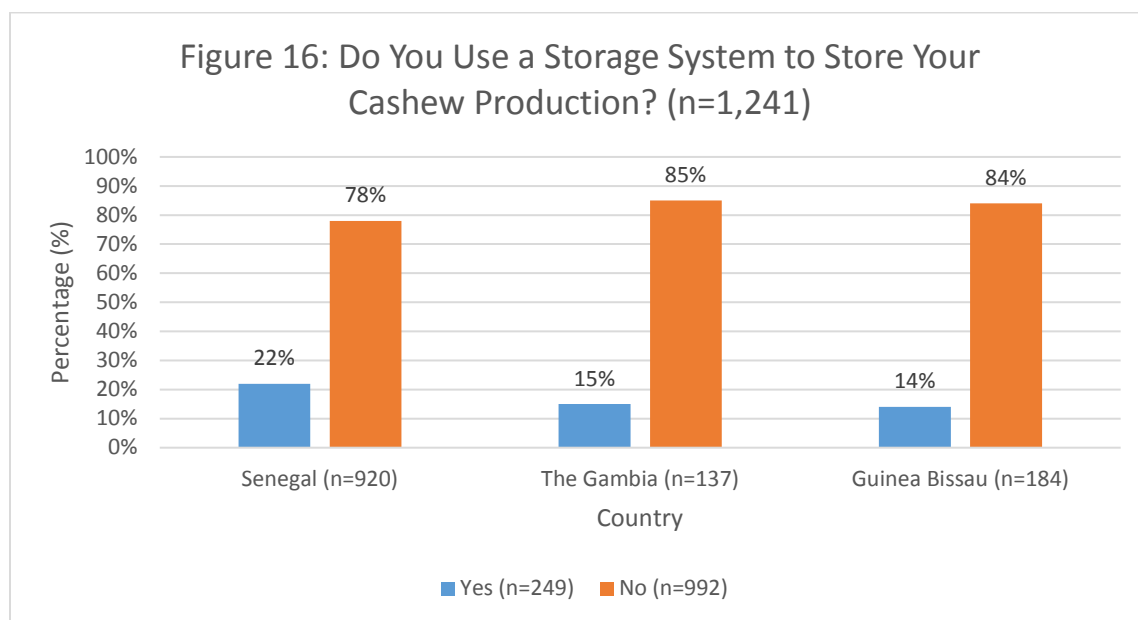


*Stair formation of cashew bags used for storage
(Source: Cherif Tamba, Arete Enumerator)*

The majority of cashew farms in Senegal, The Gambia, and Guinea-Bissau are small, consisting of approximately 1 to 3 hectares. Some producers in Senegal stated that they cultivate cashew on

two or three separate parcels of that size. Often they do not know the exact size of their farm or how many trees they have. A producer in Bignona, Senegal stated, “I have a big cashew farm, ... my farm is more than a hectare, I don’t know exactly the number of hectares nor the number of cashew plants inside.” Except in rare cases, farms are not fenced for protection from external access by stray animals or uninvited humans. Men generally own the land. However, women do inherit ownership of land from parents or spouses who are deceased. Entire families work on the farms, especially during the cashew harvest season.

Most producers lack motorized transport and carry the RCN from the fields on their backs, by bicycle, or by donkey or oxen drawn carts during the harvest season. Many producers sell the RCN harvested each day for cash to meet their immediate needs. They sell to middlemen who come directly to the farm or the village on behalf of buyers. If they are able to store the RCN for any length of time, producers generally store and dry it in their homes, due to a lack of other individual or communal space. Storage at home also prevents the RCN from being stolen if otherwise left in the field. However, the majority of the farmers in all three countries report not having a storage system as shown in Figure 16.



The cashew harvest season lasts for approximately 3 to 4 months. Therefore, most producer families must have additional income streams. Some process and sell small packages of cashew in the local markets and to tourists. Some grow cashew seedlings to plant on their farm, share with others, or to sell locally. Many families grow cash crops consisting of peanuts, rice, and a range of

vegetables, both for consumption and sale in the local markets, and men and women take responsibility for cultivating specific crops.

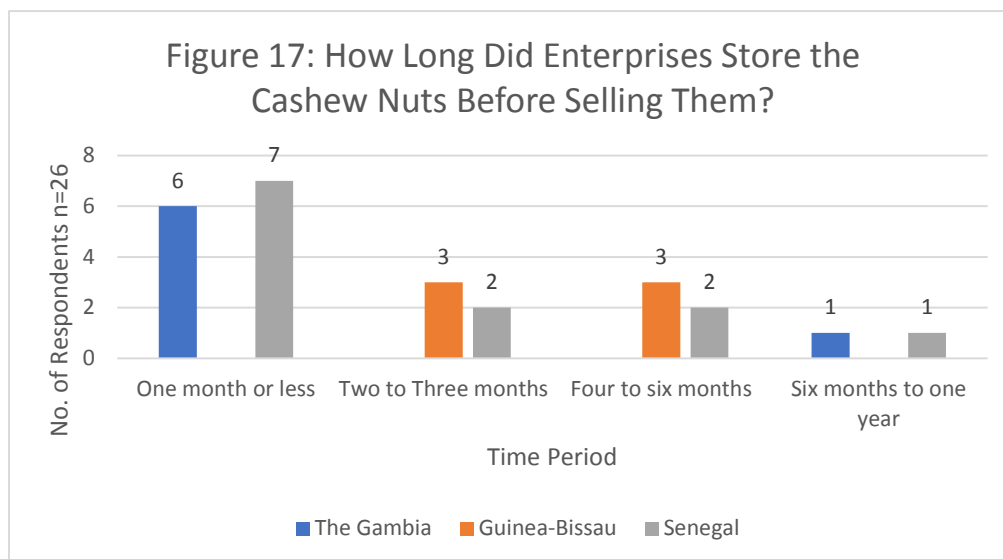
Women who collect the cashew apple at harvest time, process it into a range of products including fresh juice, jam, and cashew wine from the fermented juice; these products are both consumed by the family and sold in local markets. Villages that are predominantly Christian typically produce the wine from the cashew apple along with the other products. Predominantly, Muslim villages do not produce wine due to the common Islamic prohibition against alcohol consumption. These producers stated that they give away the cashew apple to others for processing or they feed it to their animals. However, some Muslim villages do process the apple into fresh juice and jam, and others expressed interest in learning to do so.

Arete interviewed medium-sized commercial cashew processors in each country, and one horticultural enterprise. The processors transform the RCN into kernels that are graded and packaged for sale on the international market. The horticultural enterprise consists of a farm that produces vegetables, fruit, RCN, and cashew seedlings. The vegetables and fruit are sold in local markets and exported internationally, the RCN is processed for sale in local markets, and the seedlings are sold locally.

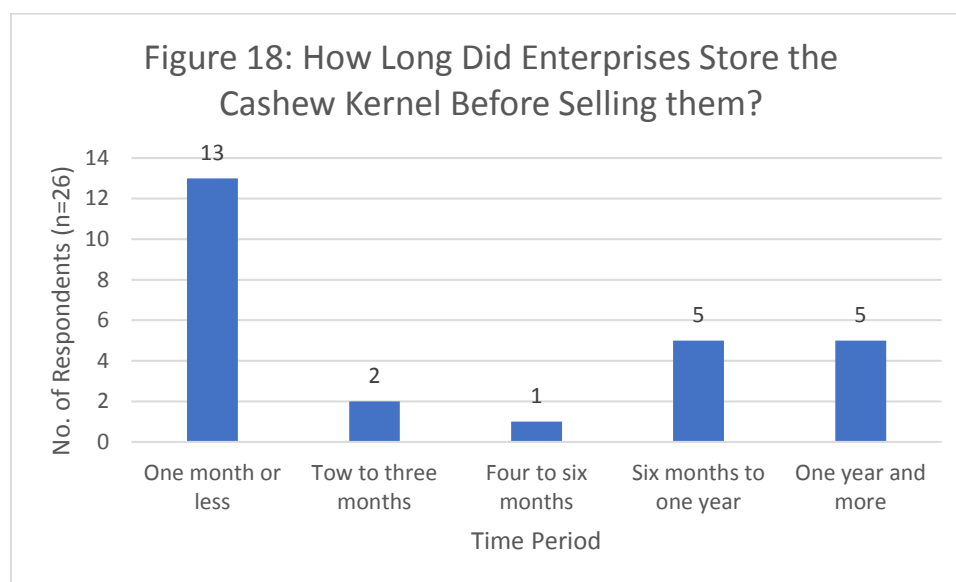
Commercial cashew processors stated that most producers do not dry the RCN on the farm just after harvest, or do not dry it sufficiently. Therefore, processors generally dry the RCN before processing, adding cost to their operations. Processors also often lack proper facilities for drying and storing the RCN. Proper drying facilities should be covered and have adequate airflow. A processor in Ziguinchor described the typical storage areas that most processors use as open, concrete covered spaces such as unused parking lots.

According to the enterprise survey data regarding distance from the enterprise to the storage area, 24 respondents stated that there was zero distance between the enterprise and the storage area, indicating that they store RCN on the site where they process. One respondent indicated that the distance to the storage area was less than 10 kilometers, and between 10 kilometers and 90 kilometers. While many of the respondents, 15 of out 26, did not find the size of the storage facilities to be adequate, 16 out of 26 stated that the storage facilities were adequate in size.

In addition, as shown in Figure 17, the majority of respondents from Senegal (7) and The Gambia (6) stored RCN for one month or less before shipping to either a domestic or international processor. Three respondents from Guinea-Bissau stored RCN for two to three months or four to six months.



In addition, according to Figure 18, half of the enterprises store the cashew kernel for less than one month. Five of 26 enterprises store cashew kernel for 6 months to one year. Five enterprises, store cashew kernel for more than one year. These results suggest that processors selling to domestic markets do not store cashew kernel for a long duration, and may not have to meet a required volume for shipping. Only those who export (10) are storing cashew kernel for more than 6 months. They often need this time to process the required quantity for export. A processor in Sedhiou, Senegal stated that he is required to fill a shipping container with cashew kernel prior to export. Due to the size of his operation, it takes approximately 6 months to process that amount of cashew.



COMPONENT 2: FINANCIAL SERVICES

ACTIVITY 3: FINANCIAL SERVICES: FACILITATE AGRICULTURAL LENDING

For the third activity, SFL plans to facilitate and encourage financial institutions to lend to cashew producers and processors. This will be accomplished through vetting and partnering with financial institutions, by providing training and technical assistance, and by connecting them with potential and actual borrowers. The main beneficiaries of this are the financial institutions and secondarily the producers and processors.

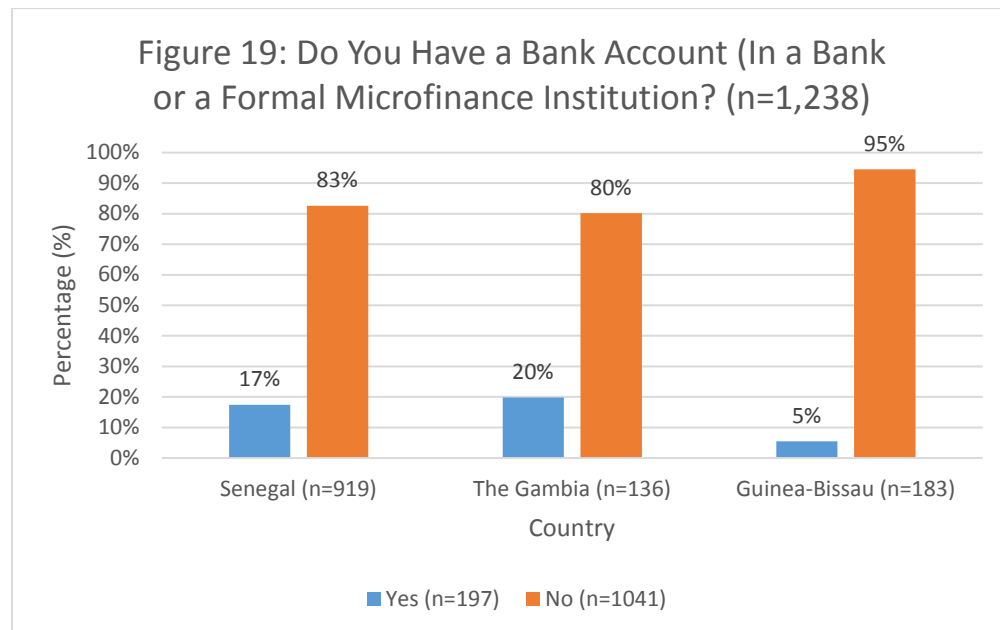
“Across Africa, banks are not accessible to ordinary people. They [borrowers] are seen as high risk” (NGO, Senegal).

Producers interviewed across the three countries commented that they believe they have limited means of borrowing money from a bank. They said that banks have no confidence in them. Banks ask for too much documentation and still do not give the loan. Interest rates are high and the payment period is too short. One producer family that also processes the cashew apple for sale, stated that as processors, they are still unable to secure a loan. Some producers in Guinea-Bissau also stated that in addition to perceiving that banks do not trust them, they also do not trust banks, and related incidents of people who lost their money when banks failed.

All stakeholders interviewed including producers, processors, NGOs, and government officials, agreed that access to finance for producers is severely limited. For example, an NGO staff person in Senegal stated, “Across Africa banks are not accessible to ordinary people. They (borrowers) are seen as high risk.” A cashew association staff person in The Gambia said, “There are no farmer-friendly banks.” Additionally, we were told: “Banks do not understand the cashew sector and do not want to take the risk.” And, that “The agricultural sector is risky, so they demand high interest, and collateral that producers don’t have.” (Financial NGO, Senegal). In Guinea-Bissau, the financial landscape is equally limited. According to representatives of banks, industry and business, the Arete team understood that one or two commercial banks that still finance the sector, lend to the top five cashew-related enterprises and exporters, and not to producers or even middlemen.

Stakeholders also pointed out that banks lack the proper kinds of finance for producers. Banks require many documents that are difficult and expensive to provide. Others commented that even microcredit organizations have high interest rates, require collateral, and have short payment periods. A government official in The Gambia stated that there are some financing options through government projects, supported by the World Bank, etc., but most producers cannot access these because they lack the required title deeds to their farms.

As is the case in rural areas throughout Africa, financial inclusion is not yet achieved for cashew farmers of Senegal, Guinea-Bissau, and The Gambia. Only about 17% of producers declared to have a bank account in Senegal, 20% in The Gambia, and 5% in Guinea-Bissau (see Figure 19).



10% of producers in Senegal declared to have received credit for cashew-related activities and 1% in both The Gambia and Guinea-Bissau (see Figure 20). While some producers surveyed have tried to get credit and were denied by the banks, most producers did not seek credit since they do not have bank accounts and consider credit to be risky. Producers stated that they do not want to lose the collateral when the level of agricultural production does not allow them to repay the amount borrowed. Particularly in Guinea-Bissau, banks, including agricultural credit unions, were considered to be unavailable to producers, and some considered banks to be untrustworthy.

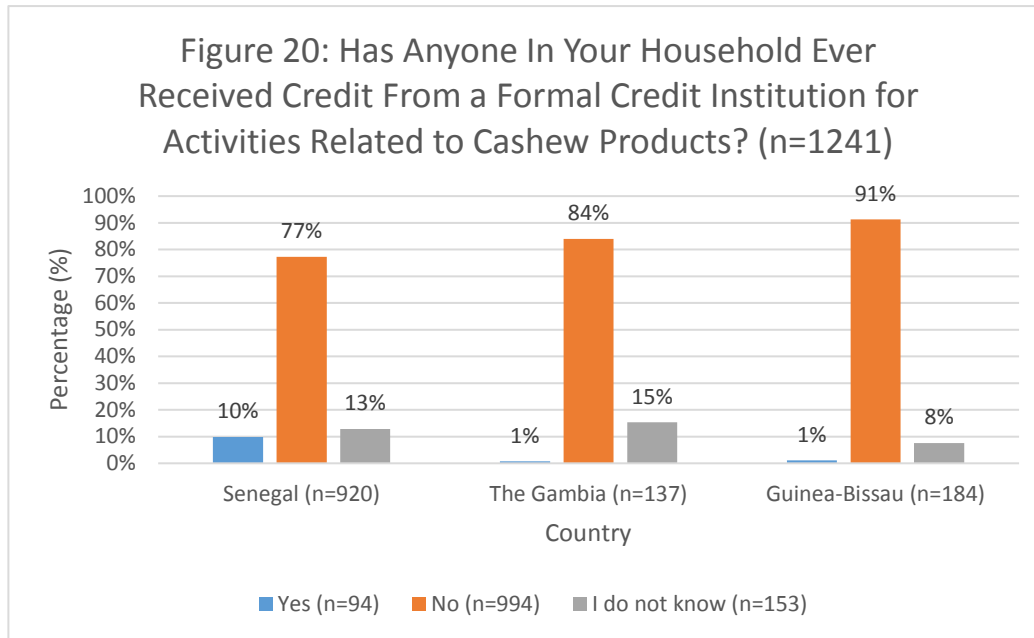
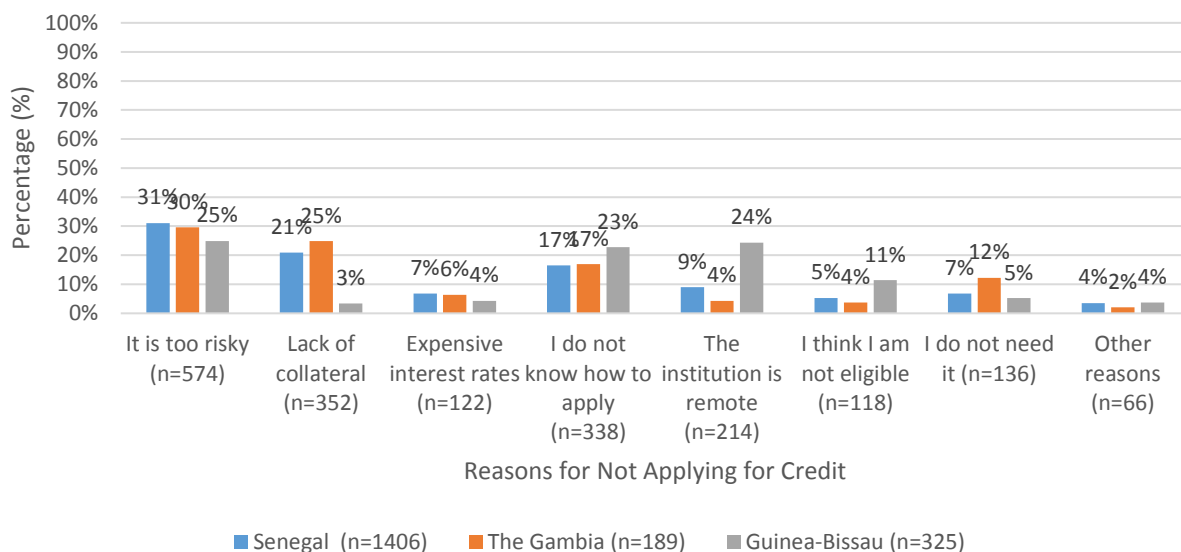


Figure 21 below provides reasons why producers did not apply for credit from a formal institution. These reasons correspond to what producers told us in our interviews with them. The most common reason expressed by 25 to 30% of producers across all countries, is a belief that applying for credit is “too risky.” Producers stated that they believe banks do not trust them as indicated by stringent conditions that banks impose, and some producers in Guinea-Bissau lack faith that a bank is a secure place to put their money. Producers in Senegal and The Gambia stated that they lack the collateral that banks generally require, although for producers in Guinea-Bissau, collateral was not as strong a reason. One producer mentioned that he thought that banks were risky because “to borrow the money, you have to work and have an account and you have to give a guarantee to allow you to borrow, if you don't pay back your money, or they will take your plantation or your room or your items.” Producers across all countries stated that they do not know how to apply for credit from an institution. Producers in Guinea-Bissau stated that financial institutions are located far away, while institutions are not as far for producers in Senegal and The Gambia. A producer in Guinea-Bissau stated that, “we really want a credit agency so we can borrow money and deposit our money – it is dangerous to go to Bissau to deposit our money. I deposit my money in a ‘boutique’ that I have trust in.”

Demand for credit for cashew-related activities is low. While credit may be available, producers perceive the conditions that institutions impose to be too stringent.

“The agricultural sector is risky, so they demand high interest and collateral that producers don’t have” (Financial NGO, Senegal).

Figure 21: Why Have You Never Applied for a Credit From a Formal Institution? (n=1,920)



*Respondents can choose multiple options.

Despite the discouraging landscape for producer access to finance, Arete learned of some efforts by financial institutions, processors, and government to assist producers. According to a producer in Senegal, last year Crédit Mutuel du Sénégal (CMS) began lending to certain producers so that they could stock their RCN until end of the harvest.

A processor in The Gambia stated that his company pre-financed some producers by giving them loans at no interest so that they could prepare their farms for the harvest. In return, the producers paid him back with RCN. He commented, “For the farmers, if we are buying RCN from them, we need to pre-finance, sometimes give them bags of rice, to keep them as a give-away price, because they are in need of something – to motivate them and keep them as customers”. While we did not speak to producers that received pre-financing, the processor also stated that sometimes the producers break the contract and sell to the middlemen if offered a better price. In an attempt to prevent this, he stated that he started going directly and talking to the village heads.

Additionally, in Guinea-Bissau, the World Bank is partnering with the large processor, ARREY, and 3 NGO-cooperatives (COAJQ, KAFO, and OPRO) to support training producers to meet processor demand while assuring that processors offer an agreed upon price and volume.

An official at the Ministry of Trade, The Gambia, described a small and medium-sized entrepreneur (SME) fund being developed by the government that will target about 2,000 producers and other agricultural entrepreneurs for loans. He stated that the fund will include extensive training and mentoring of recipients, and will be financed partly through taxes on goods entering the country from outside the ECOWAS (Economic Community of West African States) area, a regional economic union of 15 countries in West Africa.

If producers had access to funding at the beginning of the harvest season, they would not have to sell their RCN on a daily basis to get cash for their immediate expenses. They might be able to accumulate and store their RCN until later in the season for a better price.

Arete asked producers what they would do if they had access to additional funding. Producers responded that they would increase their maintenance of the farm by hiring others to do the work. They would install fencing around the perimeter to keep stray animals out and to discourage stealing of RCN during harvest. They would be able to accumulate and store RCN until later in the season and sell for a higher price. One producer stated that he and others in the village would rent a truck and drive to Ziguinchor to sell their RCN. Another would expand cashew seedling production. Others mentioned developing additional commercial activities.

Women processor cooperatives

We talked to women-owned processor cooperatives who stated that initial funding from NGOs allowed them to acquire building materials and equipment, and to receive training prior to launching their operations. A cooperative in The Gambia received funding from IRD, and a cooperative in Senegal was funded by the Union des Mutuelles du Partenariat pour la Mobilisation de l'Épargne et du Crédit au Sénégal (PAMECAS), a microfinance institution that provides finance to rural, low income households.

While the women processor cooperatives received NGO support to launch their operations, many commented that they received no follow-up or ongoing support, and are currently in need of finance to maintain their buildings and repair their machinery. One woman stated that her cooperative earns little profit, most of which goes back into repairs. When asked about financing from banks, one woman stated that only NGOs have helped them with finance and training. Others responded that they do not have access to banks for the same reasons as producers.

If they had access to funding, these women processors said they would repair their buildings and machinery, and construct a storage facility. They would also expand their operations with additional machinery and by buying and stocking more RCN and cashew apple.

“If LIFFT can support sustainable processing, we will have more processing businesses, and more jobs for women. If we can process all of the cashew instead of exporting it, that will increase jobs, mostly for women. This would have a huge impact on Senegal, [and] Guinea-Bissau. There are few other jobs. Most people are farmers” (Cashew processor).

ACTIVITY 4: FINANCIAL SERVICES: CASHEW FUND

For its fourth activity, SFL plans to establish a Cashew Fund, a mechanism that will allow small and medium cashew businesses to obtain investment funds. The fund will provide equity investments and other financial instruments to cashew-related businesses with an emphasis on local cashew processors. The main beneficiaries are enterprises.



Several people mentioned that there were grant opportunities through other NGOs and the World Bank (Guinea-Bissau) for some cashew-related activities. Some producers and processors responded positively to the idea of a cashew fund, but had few ideas about how to structure a fund.

*Women workers processing cashew at Cajou Casamance
(Source: Julie Warner, Arete Team)*

Commercial processors

Commercial processors interviewed by Arete, also stated that they lack access to finance. Interest rates are high, the lending period is short, and collateral is difficult to secure. A processor in Senegal stated that his investment in machinery is generally not enough to secure the loan, as banks prefer land and buildings to machinery. Another processor in Senegal stated that he needs cash

upfront to buy RCN, and that is difficult to do. Without financing, local processors cannot compete with exporters who will buy all of the RCN. He also commented that if prices this year are as high as last year; he may have to close his facility.

Enterprises

The enterprise survey results show that only three of 26 enterprises surveyed borrowed money, two enterprises in Senegal and one in The Gambia. The enterprises stated that they used the loans to make an investment and to have working capital to purchase raw material, to purchase or maintain equipment, and to improve the premises (see Table 6).

Table 6: Investments or Reinvestments Made in Cashew-Related Enterprises for 2017

Loan sources	Motivations	Utilizations
Bank	Investment	Purchase of raw material
	Working capital	Purchase or maintenance of equipment
Client	Investment	Improvement of premises
Spouse	Investment	Improvement of premises

According to Figure 22, 24 out of 26 respondents stated that they have not benefitted from a loan as a result of a project, but two in Guinea-Bissau have benefitted from loans.

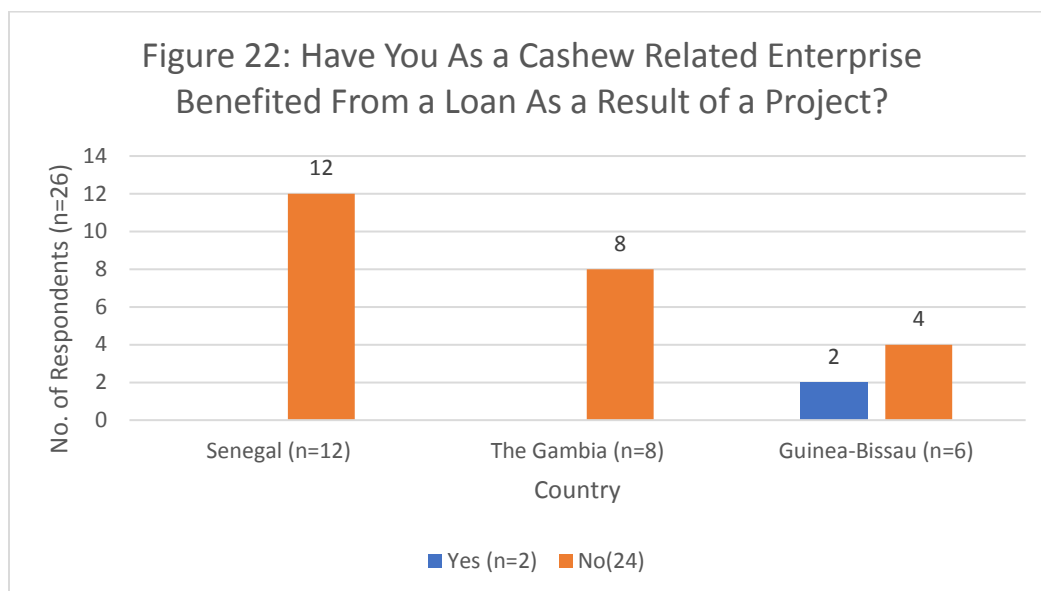
The majority of respondents, 21 out of 26, received some form of technical assistance in the past three years and benefited from it, while eight out of the 26 received grants in the past three years. The majority of the projects were funded by IRD, while others were funded by PADEC and AVSF. Overall, while the majority of respondents have not benefitted from loans, the majority has received technical assistance or grants. For example, in Senegal, IRD provided enterprises with training in cashew farming techniques, hygiene best practices, cashew apple processing, and has provided cashew seedlings. IRD also provided equipment to processors, and organized travel to Dakar to attend the “Foire Internationale de Dakar,” an annual trade fair in Dakar.¹⁵ The *Bureau de MISE à Niveau* provided accountancy training to SCPL, and PADEC assisted with a counselor for organizational development. The ACA recommended processing equipment to several enterprises that we surveyed in Senegal. The ACA also provides its members with monthly information on RCN and cashew kernel price.

¹⁵<https://cices-fidak.com>

In The Gambia, Cashew Gam received assistance from Enhancement Integration Framework (EIF) through the support of the International Trade Center (ITC). Cashew Gam received small packaging machines and assistance with acquiring the HACCP certification. The Gambia Horticultural Enterprise received bag sealing machines and bags for shipping cashew kernel. They also received assistance with the HACCP certification from the EIF Project and the Ministry of Trade.

IRD provided the Jawneh and Family Cashew Processing Enterprise with cashew processing equipment to increase capacity from 200 metric tons to 300 metric tons of RCN per annum. This equipment included: steam boilers, manual shelling machines, oven dryer and trolley, two peeling tables, one grading table, plastic crates, SS utilities basins and buckets.

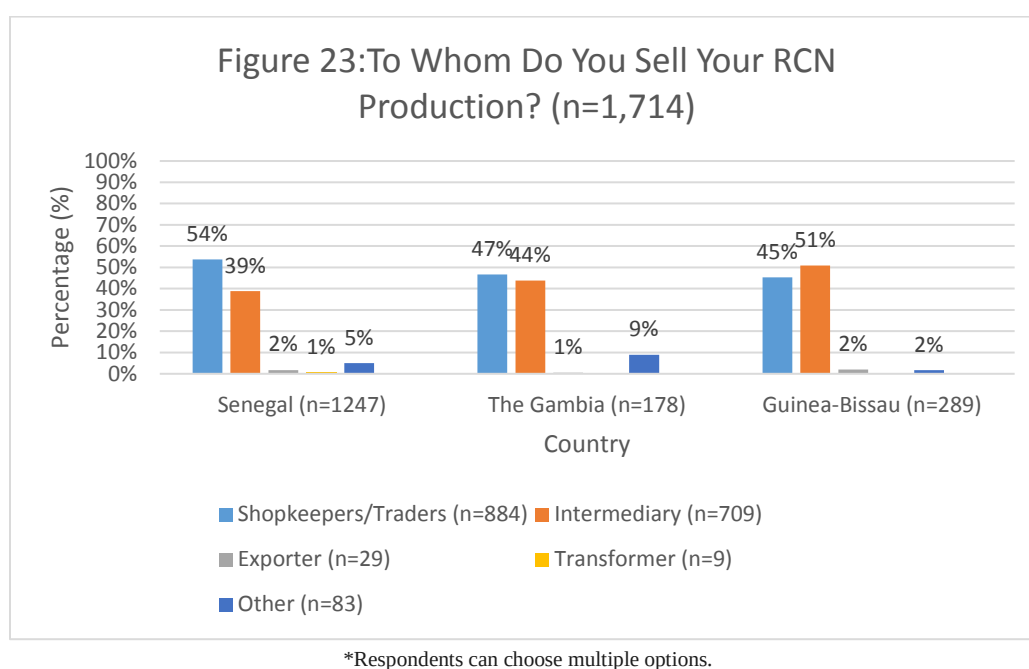
In Guinea-Bissau, for example, members of the Kouthioye Unit, a processor, received training and materials from the NGO Agronomes et Vétérinaires Sans Frontières (AVSF), and in 2010, they began semi-industrial processing. The NGO KAFO assists producer cooperatives by buying their production (nuts, apple, other agricultural products) and supplying it to partner commercial processors.



It might be that due to the availability of grants from NGOs, banks and other commercial lenders have not considered lending to cashew producers and processors, and thus there is no tradition of providing bank financial services for cashew.

COMPONENT 3: MARKET ACCESS AND LINKAGES

The analysis of market access and linkages shows clearly that producers lack control when selling their production. They face many barriers that limit their access to markets, including low production due to lack of knowledge of better agricultural practices, the dominance of the system of international traders and their middlemen, transportation issues, etc. The lack of strong associations is also an important reason for the vulnerability of the producers. One can expect all of these factors to contribute to low bargaining power that producers, and to some extent, small scale processors have. Figure 23, below, shows that those who buy RCN directly from producers are local shopkeepers and middlemen, both who generally work for larger buyers and international exporters.



Producers' lack of access to funding from financial institutions forces them to deal with middlemen and others who buy RCN on behalf of others. A trader interviewed by Arete described how much more advantageous this system is, in his opinion, for the producer than going to a bank that has so many requirements.

According to key informant interviews and FGDs, stakeholders (primarily producers, but also processors, community organizations, financial experts) concurred that the current system of RCN trade is exploitative to producers. The SeGaBi Cashew Value Chain Study¹⁶ states that

¹⁶TechnoServe (2018). *SeGaBi Cashew Value Chain Study* (pp. 1-207, Rep.).

“We don’t have any bargaining power with these buyers. They are the ones who fix the price” (Producer, Senegal).

there are 2 to 3 levels of intermediaries, including local shopkeepers and middlemen, between the producer and the final buyer of RCN who is often an international exporter. At each level, the intermediary buyers take a percentage of the sale, and therefore limit the final market share for producers. In Guinea-Bissau, for example, producers receive 50-55% of final market value (p. 61), in Senegal, 58-60% (p. 86), and in The Gambia, 64-66% (p. 111), indicating that there is potential to increase income for producers.

The large exporters control the trade by fixing the price and supplying their middlemen with cash to buy RCN, though in Guinea-Bissau a regulatory body sets a “base” price for RCN.

Many producers reported that during the cashew harvest, the middlemen come to the village each day and offer the producer a fixed amount of cash for that day’s harvest. Middlemen, while part of the cashew value chain, are almost universally decried by both producers and processors as making cashew less profitable for the producers.

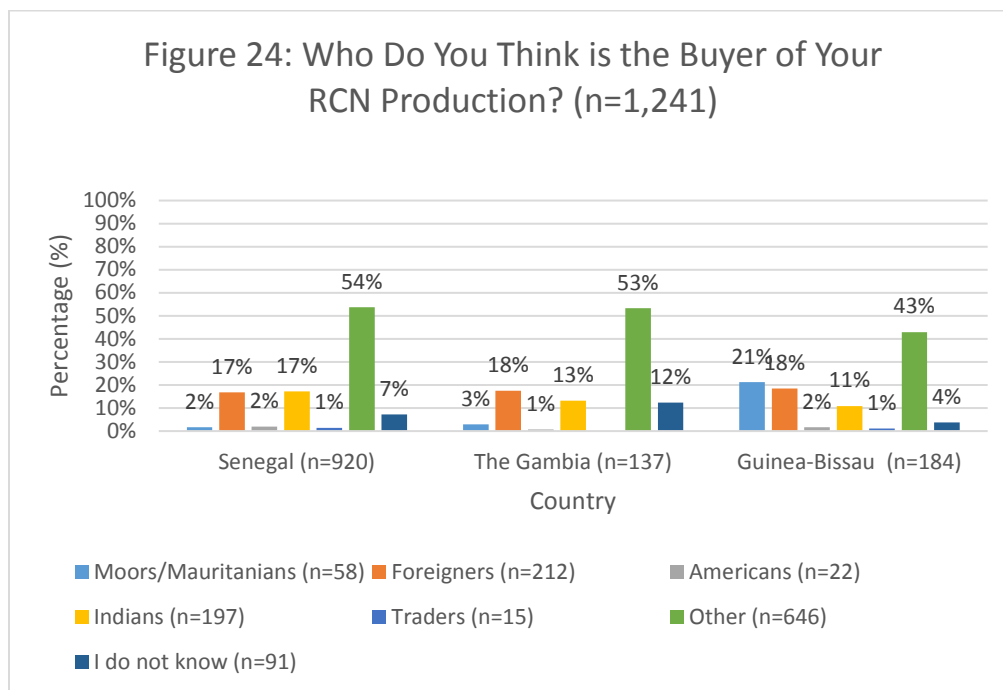
At harvest time, most producers are in need of cash and so they sell the RCN collected each day. Producers stated that because of the need for cash, it is difficult for them to accumulate RCN until later in the season when a larger quantity might allow them to bargain for a better price. However, some producers stated that they were able to sell only enough RCN each day to meet their daily expenses, and to store the rest. They also stated that because of the need to sell RCN daily, they could only estimate the total quantity harvested during the season.

Producers are aware of the exploitative nature of the buyer-seller relationship. Producers commented that the middlemen manipulate their need for cash and lack of knowledge of cashew pricing to offer them a non-negotiable price. Producers near Ziguinchor stated that Pulars, members of an ethnic group originally from Guinea, typically send local boys to buy cashew from producers, and in turn, sell it to Indian exporters.

A local trader in Ziguinchor explained that he works directly for Indian exporters. They give him a budget to work with and tell him how much RCN they need. The trader sends his own contacts to the villages to buy RCN from the producers. When the contacts have the required amount of RCN, they sell it to the trader who in turn sells to Indian buyers. He commented that he is well connected and trusted on all sides, with Indian buyers, middlemen, drivers etc. When asked if he

thought that producers should have better information about the price of RCN, he spoke in defense of the system and stated that producers do not need to know the price as the Indian exporters have many costs such as transporting and drying the RCN. Another local trader stated that he also buys RCN from producers, dries and bags it, and exports it directly to other countries for processing. He stated that he is in direct competition with the Indian exporters.

Producers were asked who they believe is the final consumer of RCN. Most producers know that RCN is shipped outside the SeGaBi region. Senegalese producers mentioned Indians and Americans as the primary final consumers. In The Gambia, producers think that Indians are the final consumers. In contrast, in Guinea-Bissau, the Moors, or Maurititanians of North Africa, were most often identified as final consumers of RCN (See Figure 24). These data point show that producers believe that countries where the RCN will be processed are the final destination, and are not aware that processed cashew is then exported to other countries for consumption.

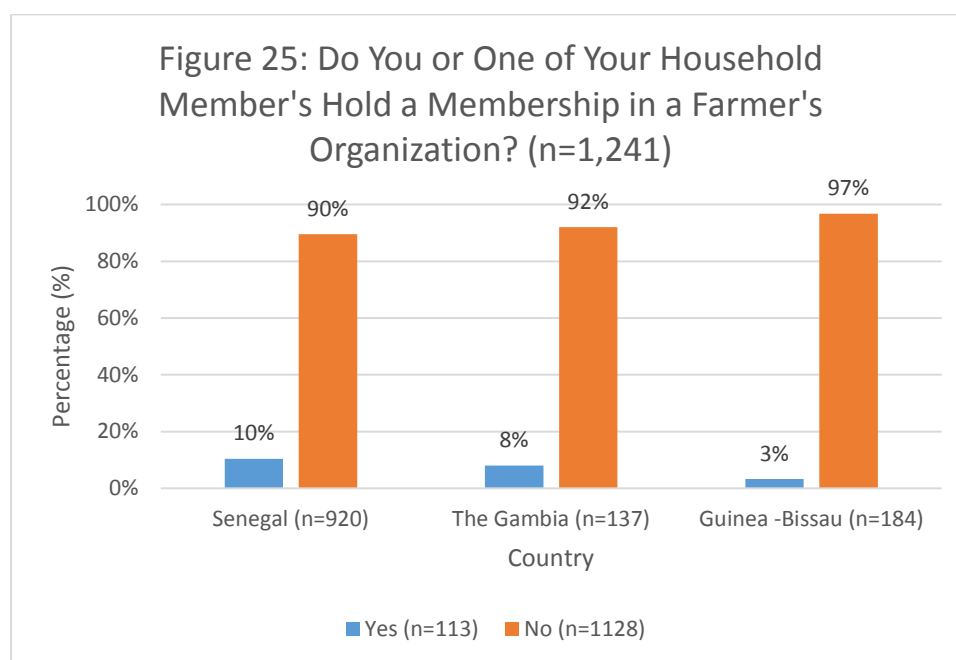


According to several medium-size processors that Arete interviewed in all three countries, cashew processing capacity is very low in the region. The processors compete with Indians and other international exporters for the purchase of RCN, and often cannot match the price exporters are able to pay the producers.

ACTIVITY 5: CAPACITY BUILDING: CASHEW MARKETING ASSOCIATIONS

For the fifth activity, SFL will seek to establish Cashew Marketing Associations (CMAs) to assist producers to sell cashew. These will be established by building new organizations or by merging existing producer groups. CMAs will receive training and technical assistance that will build capacity and improve producer bargaining power. The main beneficiaries for this activity are the cashew producers.

According to the producer survey, few producers participate in an association. In Senegal, 10% of producers participate in an association, 9% in The Gambia, and 2.8% in Guinea-Bissau (see Figure 25).



Therefore, the existing network of producers who are connected to and participate in any kind of marketing association for the purpose of selling cashew is very limited.

ACTIVITY 6: MARKET ACCESS: FACILITATE BUYER-SELLER RELATIONSHIPS

The sixth activity of the project focuses on the development and strengthening of buyer-seller relationships. This will be accomplished by linking sellers of cashew and cashew-related products to local and international buyers. This activity will seek to improve marketing, branding, and selling practices. The direct beneficiaries are buyers and sellers.



*Arete team interviews a processor in Ziguinchor
(Source: Julie Warner, Arete Team)*

Most producers sell an important share of their production at farmgate. Another important part of the production is sold at home in the village. This reveals that the transportation burden from farm to market and from village to market is assumed by the buyer who accounts for distance and transport in the price he offers the producer. While most producers do not transport their production beyond the village, and the farm is likely to be closer to the village than to the nearest town, nonetheless, most producers perceive themselves to have weak bargaining power to sell their cashew production at a fair price. The distance that the buyer must travel along primary and secondary roads is viewed as a cost and is factored into the selling price, particularly in the regions of Ziguinchor (Senegal), Fatick (Senegal) and Lower River (Gambia).

Table 7: Buyer of the Production Per Country

	Senegal	The Gambia	Guinea- Bissau	Total Responses
Middlemen/Shopkeeper/Trader	1,154	161	278	1,593
Processor	9	0	0	9
Exporter	22	1	6	29
Other	62	16	5	83
Total Responses	1,247	178	289	1,714

**Respondents can choose multiple options.*

In each country, middlemen, shopkeepers and traders represent the largest buyers of the production, approximately 93% in Senegal, 90% in The Gambia, and 96% in Guinea-Bissau. In total, the majority (approximately 93% of the surveyed producers) reported selling to middlemen, shopkeepers, and traders (see Figure 23 for another representation of this information).

Additionally, most producers prefer to remove the middlemen and sell directly to buyers with the hope of building relationships with them and receiving a higher price. On average, about 72% of producers in all three countries rate their power to bargain for a fair price as weak (see Figure 26).

“Because there is no credit for producers, we often do a verbal contract with middlemen. They give us one sack of rice after the harvest and we give them one sack of RCN. We know very well that we are losing a lot of money, but we don’t have a choice because at the moment we are in dire need, we are forced, otherwise our families will die of hunger”
(Producer, Guinea-Bissau).

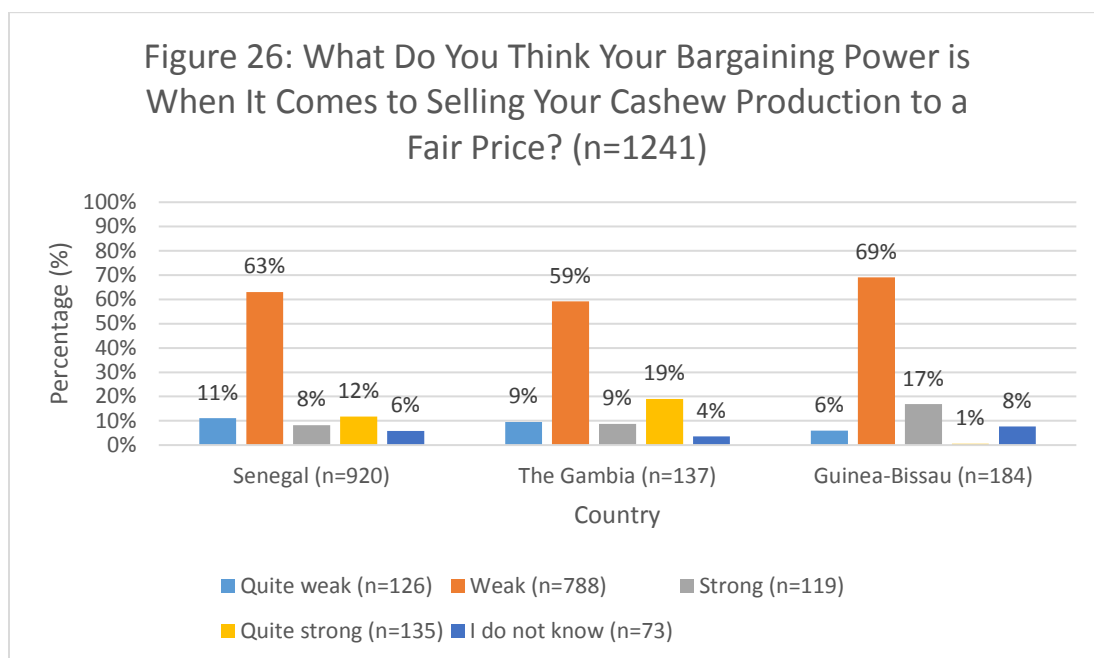
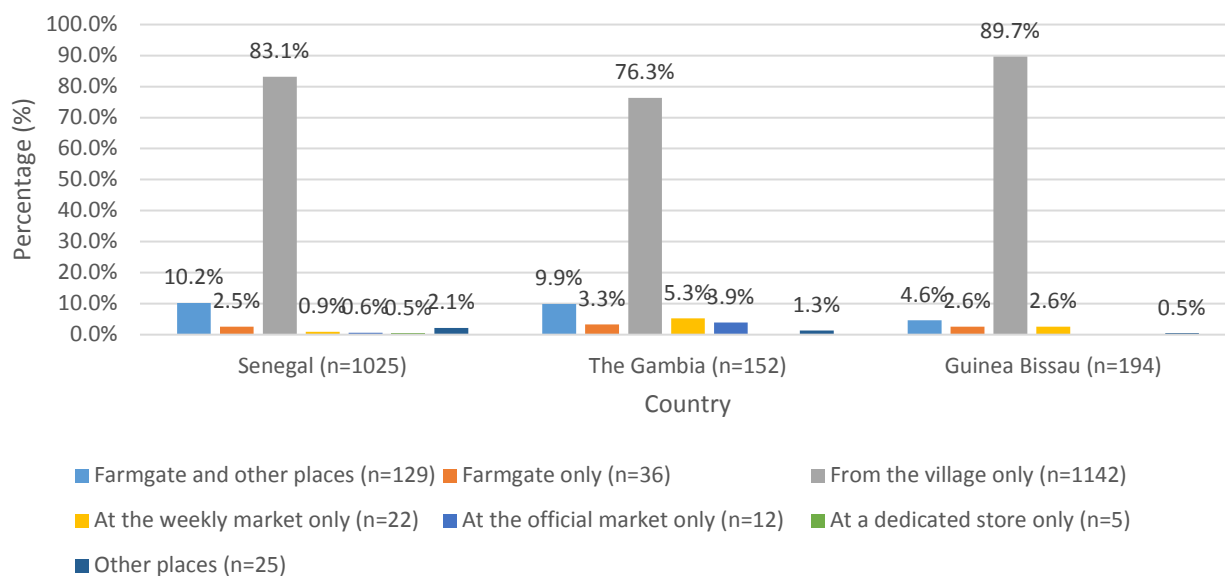


Figure 27 below illustrates that the majority of producers in all three countries sell cashew apple from the village. Over 75% of surveyed producers who sell cashew apple in each country sell only from the village and not from other venues.

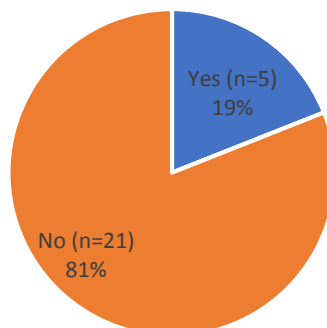
Figure 27: Where Do You Sell Most Of Your Cashew Apple Production? (n=1,371)



*Respondents can choose multiple options.

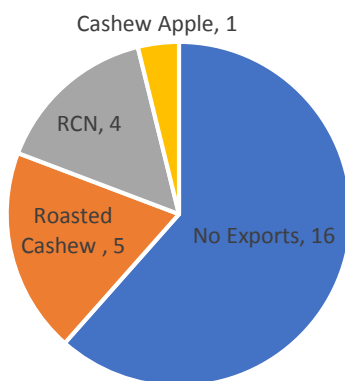
A website is a common way to reach buyers and to facilitate buyer-seller relationships. As shown in Figure 28, based on our enterprise survey data, approximately 81% (21) of the respondents stated that they did not have a company website. Out of five respondents that did have a website, two are in The Gambia and three in Senegal. Only one respondent, in Senegal, makes online sales. Also, none of the surveyed enterprise makes purchases online. The results suggest that enterprises in the SeGaBi region are not routinely using the internet as a means of business operations. To facilitate market access and build buyer-seller relationships, enterprises will need assistance to develop their technology to market, brand, and sell their products online.

Figure 28: Does Your Enterprise Have a Website?



Currently, the majority of enterprises sell their products to buyers in the SeGaBi region (see Figure H4 in Appendix H). Further, majority of enterprises surveyed (16) stated that they do not export. Based on Figure 29, of the 10 respondents who do export, five export roasted cashew, four export RCN, and one exports cashew apple (total volume and revenue by cashew type for domestic and international markets for enterprises in 2017 can be found in Appendices H and CC).

Figure 29: Does Your Company Export the Following? (n=26)



Based on Table 8, enterprises formed new buyer-seller relationships primarily in Senegal and The Gambia in 2017. For example, seven new relationships were established for RCN (Three in

Senegal and four in The Gambia). Three enterprises each in Senegal, The Gambia, and Guinea-Bissau established new relationships in 2017 for processed cashew kernel. Also, four new relationships were established for roasted cashew nut in Senegal and three in The Gambia, and four new relationships were established for cashew apple in Guinea-Bissau and one in Senegal. For example, a major client for the company GAP Solution in Guinea-Bissau is SCPL in Ziguinchor, and the latter has also established a buyer-buyer relationship with Lysa NCO SA, Boursine Internationale, and Ethik in Senegal. Moreover, GIE Diacounda developed a relationship with ACASEN in Senegal. GIE Diacounda has specialized in the last two years in improving the access to raw materials by supplying processors directly. ACASEN receives RCN and processes up to the dehulling stage.

Table 8: New Buyer-Seller Relationships by Country

Number of New Buyer-Seller Relationships Established in 2017	Respondent Country			Total
	Senegal	The Gambia	Guinea-Bissau	
RCN	3	4	0	7
Cashew nut kernel	3	3	3	9
Roasted cashew nut	4	3	0	7
Cashew apple	1	0	4	5

Table 9 identifies the most significant difficulties currently faced by a majority of the enterprises interviewed in the SeGaBi region. Out of 26 enterprises surveyed, 19 noted that they face “many difficulties” accessing credit. Fifteen enterprises indicated that they face “many difficulties” in the flow of their product due to the competition to access supply. Fourteen enterprises face “many difficulties” in terms of the high cost of processing; availability of raw cashew (quantity and quality), availability and regularity of raw materials, and recruitment of qualified personnel.

Table 9: Which of the Following Difficulties that your Enterprise Encountered are the Most Significant?¹⁷

	Yes, Many Difficulties	Yes, Few Difficulties	No	Not Applicable	Total
Access to credit	19	2	4	1	26
Flow of product due to the high number of competitors (to access supply)	15	2	9	0	26
Supply of raw cashews (Quantity and quality)	14	2	8	2	26
High cost of processing	14	6	5	1	26
Availability and regularity of raw material supply	14	2	9	1	26
Recruitment of qualified personal	14	3	9	0	26

For example, in Guinea-Bissau, even though the cashew sector suffers because of the rising price or RCN, some large processing units such as SANTY LIAMCO and ARREY continue to supply domestic and international markets. However, in the regions of Cacheu and Oio, one finds small artisanal and semi-industrial units similar to those in the Casamance region. Many processing units in Guinea-Bissau have closed for a number of reasons including the high cost of energy in the country that increases the cost of manufacturing; the high price of RCN; the lack of access to finance; and the general political instability in the country. The Cashew Transformers Association (ATC) has developed initiatives to support the sector, but lacks funding for implementation. At the price of 1,000 FCFA per kilo of RCN, processing is almost impossible for many units. Therefore, some units prefer to focus on processing the apple. Other entrepreneurs have converted to collecting RCN to sell to larger units.

More information about trainings that enterprises completed; certifications; and perceived benefit from policies, regulations, and procedures can be found in Appendix H and Appendix CC.

ACTIVITY 7: CAPACITY BUILDING: TRADE ASSOCIATIONS

In the seventh activity, SFL will support and build the capacity of trade associations in each country so that these associations can more effectively engage with the cashew value chain. Trade associations are membership organizations that typically engage with and serve all actors along the value chain. The primary beneficiaries of this activity are the local and national trade associations and their members.

¹⁷ Respondents can select multiple options

*“There is a need for organizing our farmers and strengthening their associations”
(Cashew Value Chain Organization, The Gambia).*

Producers and processors mentioned the need to strengthen cashew trade associations to better engage with actors along the value chain. As we have noted, few producers are directly engaged with a producer association, and it is uncertain whether these producer groups are members of a trade association.

According to Table 10, 16 of the 26 enterprises surveyed are not members of a cashew trade association. Ten enterprises participate in a trade association. However, several enterprises participate in collaborations between African Cashew Alliance (ACA) and country organizations such as the Cashew Regulatory Agency of Guinea-Bissau (ANCA), the Association des Transformateurs de CAJU (ATC) in Senegal, and the Cashew Alliance of The Gambia (CAG). The remaining enterprises each participate in one association, consisting of ACA, Coopagcasse, Cigale et Croak, or ATC.



*A producer roasts and packages cashew nuts for sale to tourists in Cap Skirring
(Source: Julie Warner, Arete Team)*

Table 10: Enterprise Membership in Trade Associations

Name of Trade Association	Country where Trade Association Operates	Frequency (n=14)
African Cashew Alliance (ACA)	Senegal, The Gambia, Guinea-Bissau	2
Association des Transformateurs de CAJU (ATC)	Guinea-Bissau	4
Coopagcasse	Senegal	1
Cashew Alliance of Gambia (CAG)	The Gambia	3
Cigale et Croak	The Gambia	1
Cashew Regulatory Agency of Guinea-Bissau (ANCA)	Guinea-Bissau	3

*Respondents can select multiple options.

COMPONENT 4: ON FARM PRACTICES

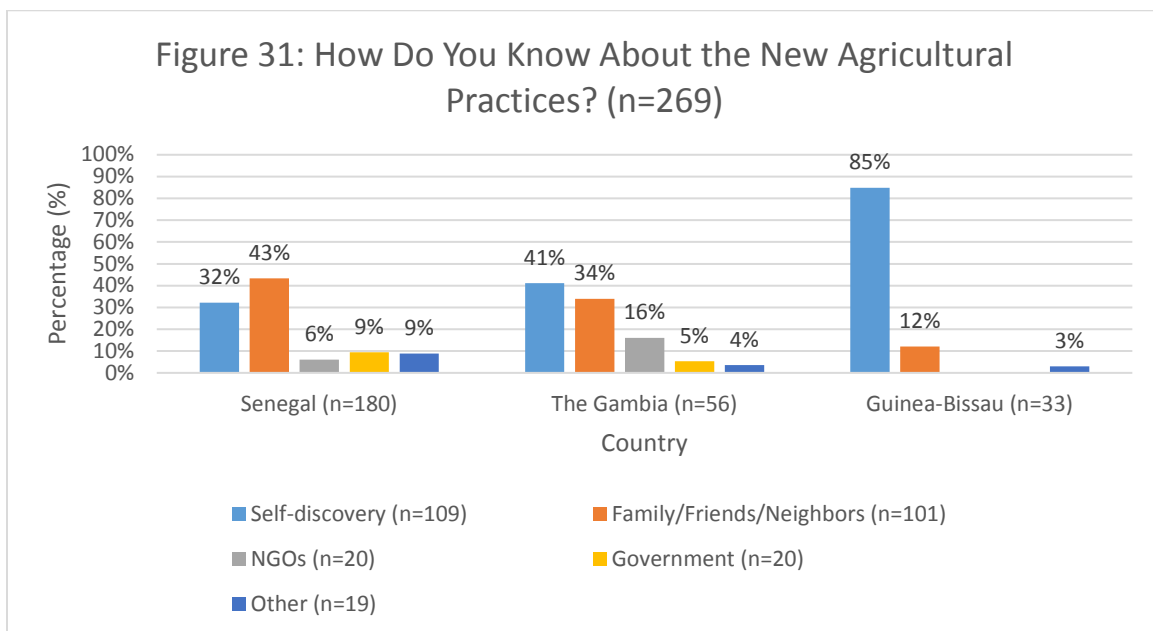
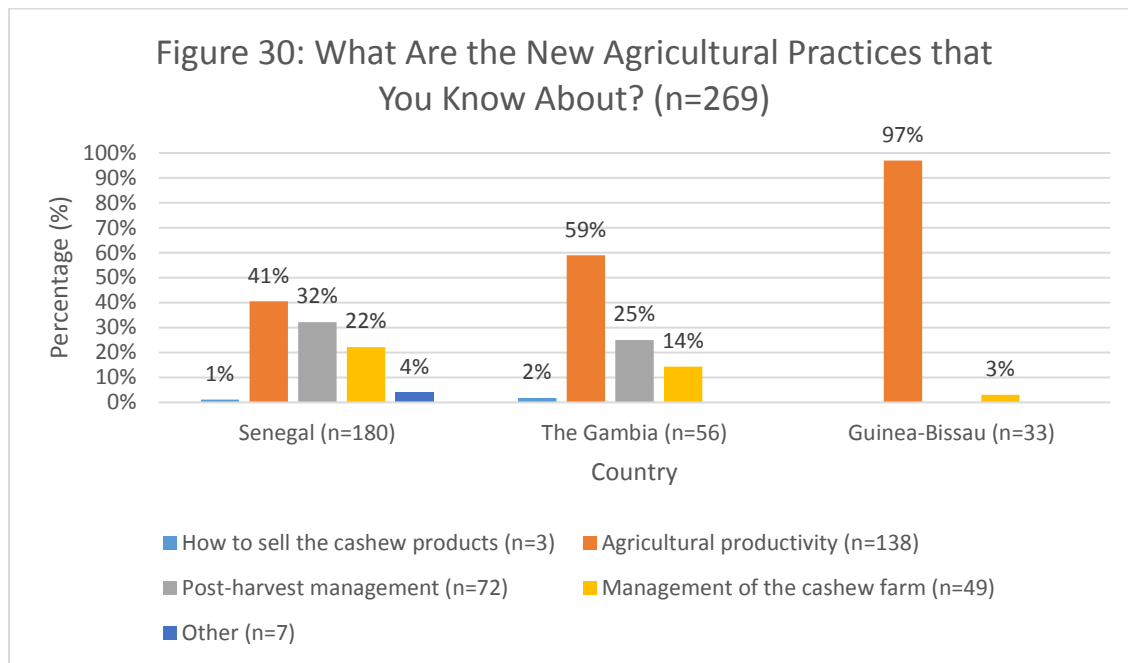
ACTIVITY 8: AGRICULTURAL DEVELOPMENT: DEMONSTRATION PLOTS AND NURSERIES

In the eighth, and final, programmatic activity, SFL will encourage producers to apply Good Agricultural Practices (GAP) through training opportunities, provision of in-kind grants, and the development of cashew nurseries and demonstration plots. Additionally, SFL will assist nursery enterprises to develop their capacity to produce high quality cashew saplings and work with local organizations, government extensions, and local universities involved in relevant agricultural research and training practicums. The key beneficiaries of this activity are the cashew producers.

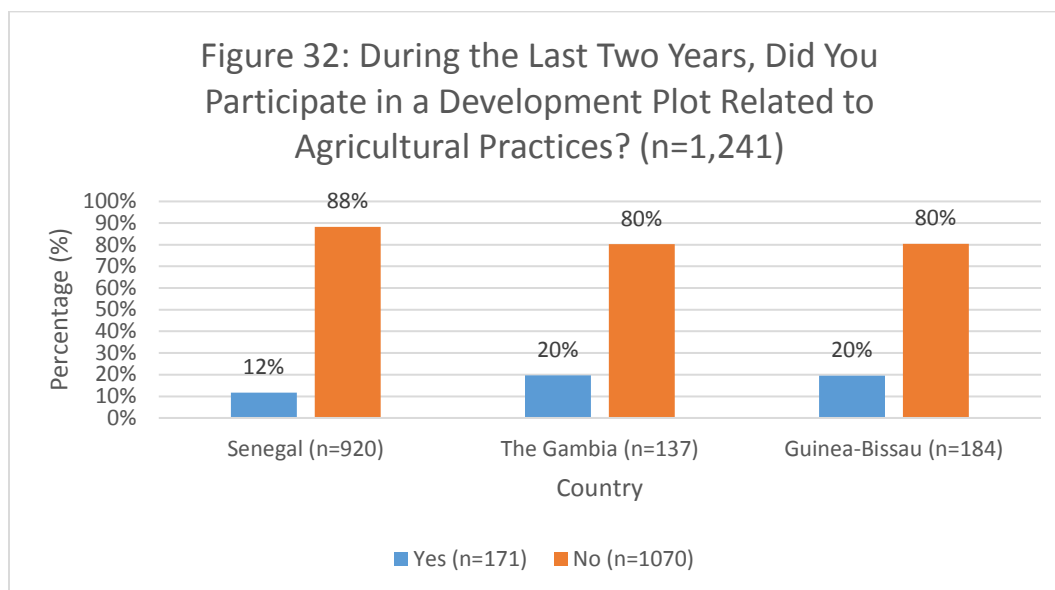
Producers in all three countries are interested in learning better agricultural practices that would help increase their production. In all regions surveyed, only Sedhiou in Senegal reported that about 6% of producers have participated in the past two years in an agricultural training or demonstration. In other regions, less than 6%, or even 0% of producers reported having access to any agricultural training. During FGDs with producers, many requested training in best agricultural practices recommended for cashew cultivation. Producers are aware of these practices. However, most stated that they do not have enough knowledge or skill to implement the practices on their farm.

Among the producers who stated that they have knowledge about new agricultural practices related to cashew, less than 2% know about selling practices in Senegal and The Gambia, while in Guinea-Bissau no farmers reported to know about selling practices (See Figure 30). The practices they are

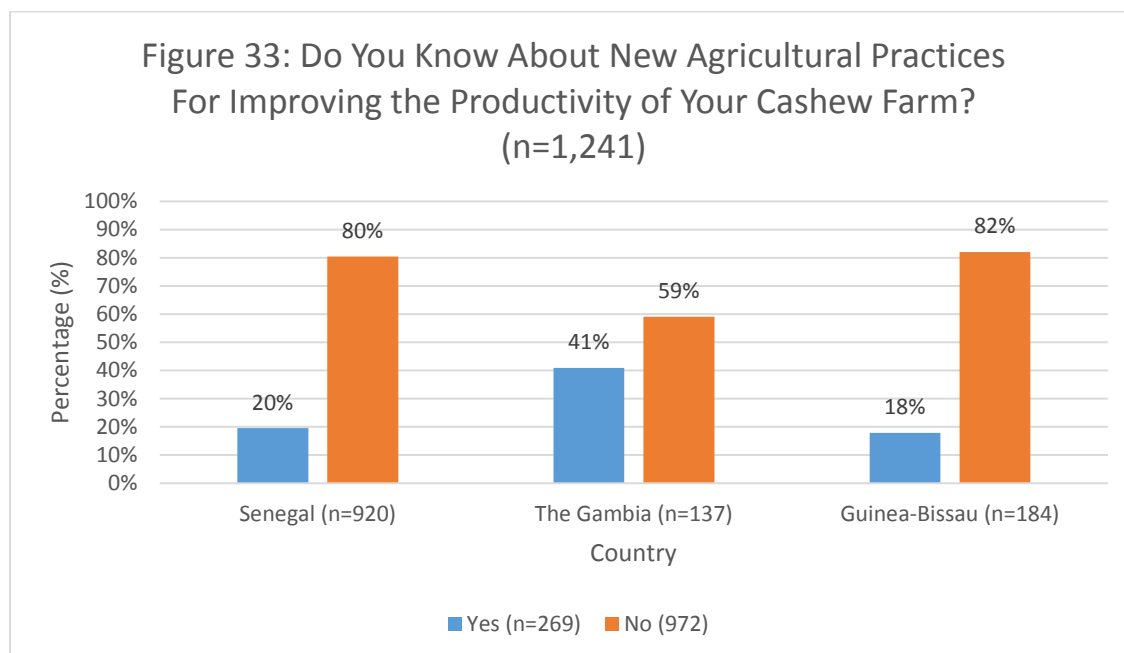
familiar with involve learning on their own or from family and neighbors about agricultural productivity (See Figure 31).



Additionally, Figure 32 shows for all three countries that over 82% of producers during the last two years did not participate in a demonstration plot related to agricultural practices.



While FGDs with producers indicated that at least some know about new agricultural practices for improving cashew productivity, the producer survey suggests a much lower perceived knowledge of new practices (See Figure 33 above).



Based on our qualitative data, cashew producers generally practice the following agricultural techniques in the region. However, it is important to remember that not all producers apply these techniques.

Drying RCN on the farm

Producers often are unable to dry the RCN on the farm before selling it. Many must sell RCN daily for cash, and do not have the proper space for drying. In addition, RCN is sold by weight, and when dried it weighs less, so there is less incentive to dry it. Therefore, it is processors and traders who dry the RCN. Stakeholders, including processors, argued that producers should dry the RCN on the farm before selling. They stated that producers would ultimately get a higher price and processors would get better quality RCN.

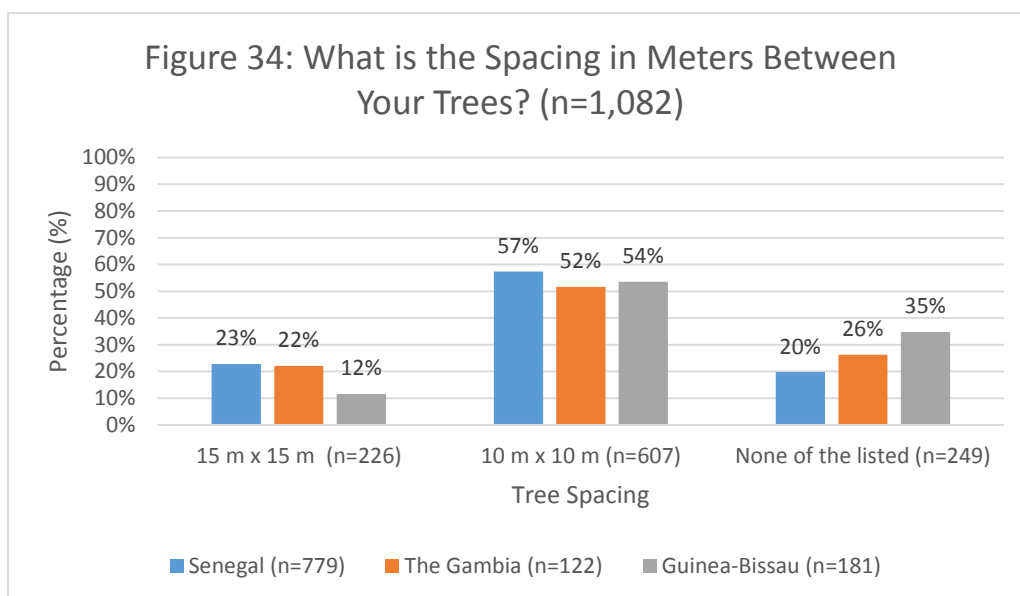
Cleaning and general maintenance

General maintenance of the farm involves cleaning brush and debris on the ground between the trees, pruning (including dead branches), and removing dead trees to avoid pest infestations. Proper cleaning and pruning allows for easier gathering of the RCN, reduces the risk of fire, and allows air circulation between the trees. According to interviews with producers, most do this maintenance just before the harvest season, rather than all year around. They either hire day workers or do it themselves, both of which are a burden on most producers. Several other stakeholders interviewed by Arete criticized producers for not maintaining their fields in better condition.

Spacing and intercropping

Spacing between mature cashew trees is recommended at a distance of about 10 meters (m) for maximum productivity. While trees may be planted closer together, as they mature some are removed to create optimum spacing. Interviews with stakeholders at cashew organizations and government agencies confirmed this practice. While producers generally know about this practice, many were not aware in the past when trees were planted, and therefore, farms are still overgrown. In addition, if trees are spaced at a proper distance, there is room to intercrop with beans or peanuts, which also enhance the soil quality.

Figure 34 presents the spacing protocols that producers apply. Slightly more than 50% of producers surveyed in all three countries are spacing trees at 10 m apart. Approximately 20% to 35% in each country are not spacing trees according a specific protocol, and may be spacing trees at random distances apart.



Direct planting of seeds versus seedlings

At the beginning of the rainy season, it is common practice to cultivate new cashew trees by planting seeds directly into the ground. However, some producers we interviewed stated that rodents and stray animals eat the seeds or young shoots. Producers understand that planting seedlings is a better method, but even seedlings are often eaten by animals.

Some producers grow seedlings for their own use or to sell. One producer stated that to protect seedlings from rodents and domestic animals, he applies a mix of cow or goat manure and urine to the leaves. Others apply dry pine needles around the seedlings. Other producers stated that they want to use seedlings, but do not have the training or the space to grow them.

Additionally, producers desire assistance to implement the following practices, infrastructure, and materials to increase their production:

Better varieties of cashew trees

Producers and other stakeholders are aware of the need for improved varieties of cashew trees that have a higher yield and are more insect resistant. Many current varieties produce fewer and smaller nuts that are not as competitive on the global market. Producers are also aware that they need training in cultivating these new varieties.

Fencing to contain stray animals and discourage theft

The lack of fencing around farms was a common complaint. Most farms are not enclosed and are subject to stray farm animals that typically roam free. Many producers also believe the fencing will also deter the problem of theft of RCN at harvest time.

The occurrence of brush fires

Brush fires are a common problem on farms. Causes given for fires include producers who clean their fields by burning the brush on the ground and hunters who place smoke or fire into the burrows of small game animals. Safer methods of cleaning the farm, education about the causes of fires, and improved roads around the farms would serve to reduce the incidents of bush fires.

In summary as shown in Figure 32, 80% to 88% of producers in the three countries stated that they have not participated in trainings or demonstrations about new agricultural practices in the past two years. In each country, therefore, there is potential to increase producer knowledge through training and demonstrations (See Appendix CC for more details).

In terms of technological innovation, producers who report using new farming techniques to improve productivity represent 20% in Senegal (180 of 920 producers), 41% in The Gambia (56 of 137 producers), and 16% (56 of 137 producers) in Guinea-Bissau (see the section on Baseline Performance Indicators for Producers). The higher percentage in The Gambia may be a result of past agricultural training programs such as the Farmer Field Schools hosted by Enhanced Integration Framework (EIF) from 2012 to 2015 and that focused on groundnut, sesame, and cashew. These schools taught producers good agricultural practices and basic financial education to ensure product quality enhancement in export for the 3 sectors. A representative of the Cashew Alliance of The Gambia stated that training materials and curricula were developed and could be used again in subsequent programs.

ADDENDUM: POST-HARVEST USE OF CASHEW SHELLS BY ENTERPRISES

Related to post-harvest use of the cashew shells after processing, Table 11 shows that 13 enterprises out of 26 surveyed use the cashew shells as fuel for boiling and steaming RCN. One enterprise uses the shells as fertilizers, two enterprises sell the shells, and four use them for other purposes. Six enterprises discard the shells without further use. An enterprise representative for SCPL Cajou/Deli Cajou in Senegal said: “We discard gold by throwing away the cashew nut shells while it is possible to use them as fuel. But this technology is very expensive. To make electricity from the shells for 1kW, we need 2500 Euro of investment. The current need is 30 kW [of energy] for my company.”

Table 11: Uses of the Cashew Nut Shells after Processing

Category	The Gambia	Senegal	Guinea-Bissau	Total
Combustible for boiling, steaming	7	4	2	13
Discard	0	5	1	6
Sell	0	0	2	2
Use as fertilizers	0	1	0	1
Other	1	2	1	4

CROSS-FUNCTIONAL ACTIVITY

ACTIVITY 9: MANAGEMENT OF INFORMATION SYSTEMS



*Focus group of cashew producers. Many producers receive knowledge of prices by word-of-mouth.
(Source: Julie Warner, Arete Team)*

This baseline assessment did not directly address or gather data about the management of information systems because this activity has not been fully operationalized. Virtually no stakeholder outside USDA or SFL staff mentioned this component. USDA and SFL stated that this component will be implemented as the program unfolds in the future.

However, some data about how producers receive their information was collected. Most producers receive knowledge of selling price for cashew products by word of mouth. In Guinea-Bissau, we interviewed COAJOC (Cooperativa Agri-Pecuària de Jovens Quadros), a youth cooperative that conducts radio and television broadcasts of agricultural information throughout that country, providing an additional source of information.

As we have noted, few producers are members of producer associations, and likely fewer are engaged with a trade association. Less than 5% of producers stated that they receive information from associations of producers.

“Information is very important. It helps when making informed choices. The farmers felt that they are in a better position to know whether to sell at a given price, and whether or not they are being duped. They also have to play smart in terms of whether to sell or not. It puts the farmers in a position to know what is going on in other countries, because the local price of cashew is effected by what is happening globally” (Cashew Value Chain Organization, The Gambia).

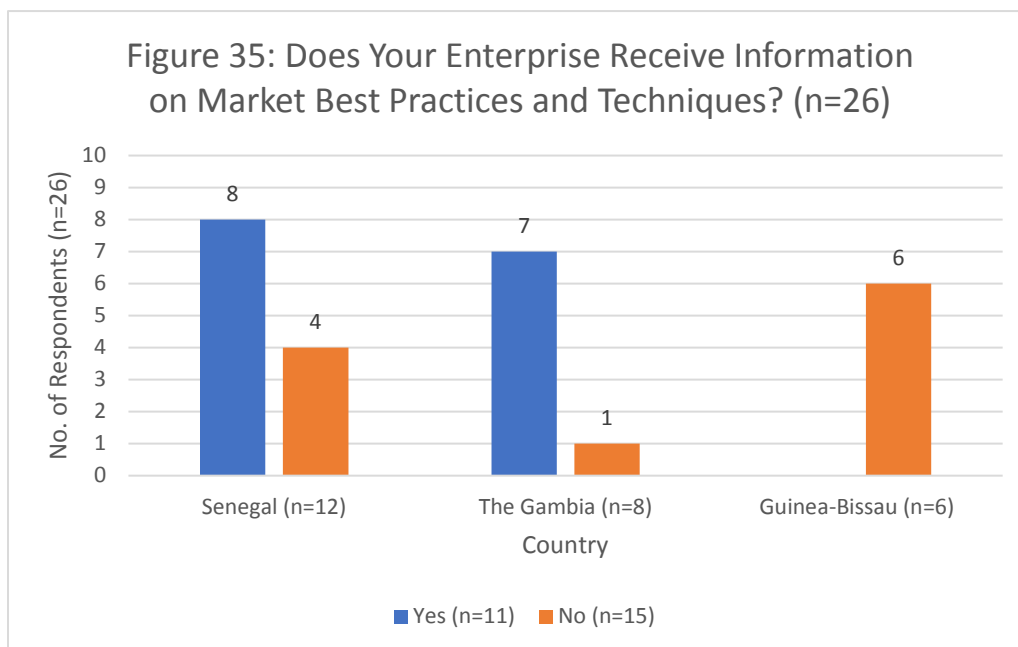
However, in each country, initiatives that deliver market information to producers by means of a phone-based SMS text messaging system exist or are being implemented. These initiatives are important contacts and would be a useful component of the information system to be built. They are briefly:

The Cashew Alliance of The Gambia in collaboration with other organizations has developed a text messaging system that will offer producers information about current RCN pricing, status of supply, and, timing to sell. They are also working on a voice messaging system so that producers who are illiterate can access current information.

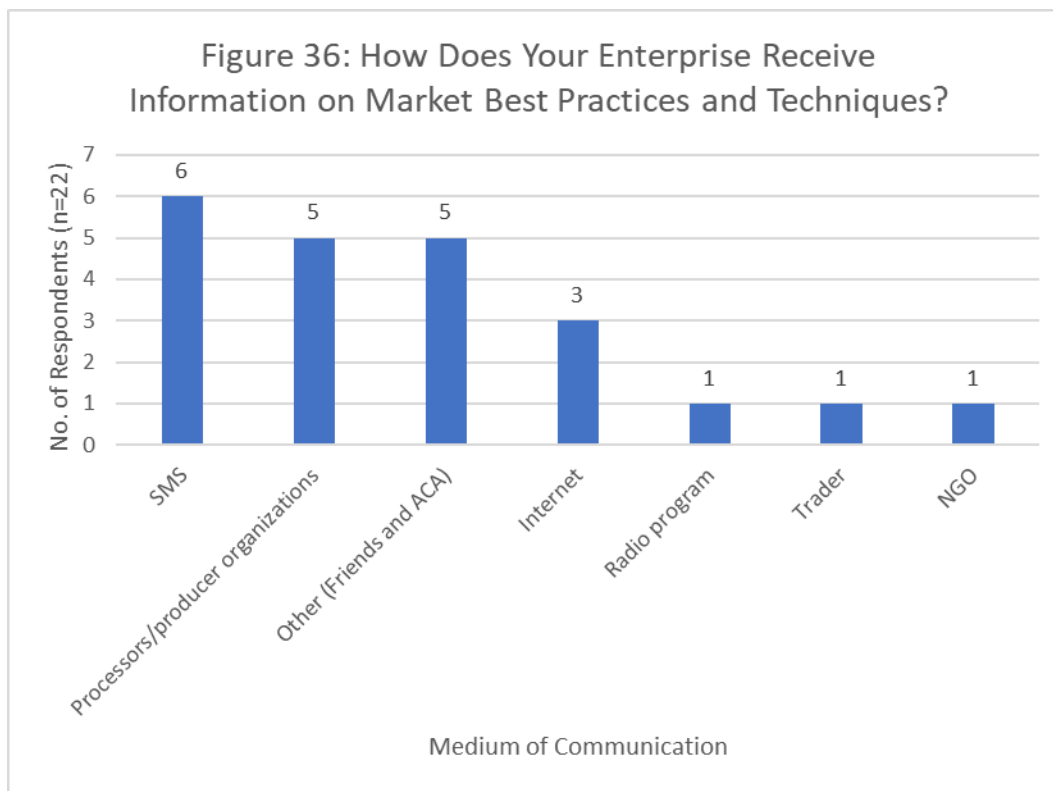
ANCA in Guinea-Bissau, has collaborated with public and private partners to develop a similar cashew marketing information system to be available for the 2018 harvest season. Also, COAJQ, a youth cooperative in Guinea-Bissau provides current cashew market information by using regular radio and television broadcasts.

IRD supported an SMS text messaging system in Senegal that provided value to producers in Ziguinchor. However, IRD eventually began to charge a small amount of money for this service, and producers were less willing to pay for the service.

Out of 26 enterprises surveyed, eight respondents in Senegal and seven in The Gambia received information on market best practices and techniques. No respondents from Guinea-Bissau received such information (See Figure 35).



15 of 26 enterprises surveyed stated that they regularly receive information on the cashew market regarding price and demand. According to Figure 36, the majority of enterprises receive information on market best practices and techniques from SMS text messages, processors and producers, and from other sources (friends, the ACA etc.). A few received information from Internet, radio, traders, and NGOs. No one received information via newspapers.



ADDENDUM: POTENTIAL CASH FOR WORK LABORERS

Based on a focus group discussion with Potential CFW laborers and on the experience with the Final Evaluation of SFL's SRR project, CFW laborers valued the money received; thought the payment was appropriate for the work; and appreciated the possibility of forming relationships with their co-workers. Laborers expressed interest in seeking more CFW opportunities. An issue of concern, however, was that laborers were offered transportation to the work site, but sometimes were left behind and had to find their own transportation. A laborer also recommended that CFW laborers be provided a fund to allow them to continue to meet and work together on different projects.

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APPENDIX A: DEFINITION OF KEY TERMS

RCN or raw cashew nut = The unshelled nut, separated from the apple.

Cashew apple = The fruit connected to RCN, typically used locally for local alcohol though generally only among communities with Christians, it is less common among Muslim communities to produce alcohol.

Cashew kernel = The kernel once the shell has been removed; this product has several grades or categories of grades depending upon perceived quality.

Description of the Variables Involved in the Estimation of the PSM

Total_land= The total are of land owned by the surveyed cashew farmer.

Age= The declared age of the surveyed cashew farmer.

Town_proximity= The appreciation of the proximity between the place of habitation and the closest town.

Farm_proximity= The appreciation of the proximity between the farm and the place of habitation.

Livestock_wealth= An aggregated indicator of wealth calculated by doing the sum of the livestock including all declared types starting from poultry.

Household_size= The size of the household in terms of members who composes it.

Total_children= The number of children living in the household.

Education_level= The level of education achieved by the interviewed farmer the lowest to the highest.

Source_of_lighting= The main source of light used to lighten the place of habitation.

Mean RCN price= The mean selling price of the RCN calculated on the basis of the declared lowest and highest RCN the producer obtained during the 2017 season.

APPENDIX B: DESCRIPTION OF ARETE EVALUATION COLLABORATIVE

Arete Evaluation Collaborative is a multidisciplinary collaborative consulting firm of international development specialists with extensive experience in monitoring and evaluation, project design and management, and mixed methods research. Arete has particular strengths in working in education, livelihoods, leadership development, and agricultural value-chain sectors as well as a strong background of work in East Africa, South Asia, and the United States of America. As a firm, we are committed to helping people gain wisdom about their work, contributing to evaluation through intercultural perspectives, and helping good programs better contribute to human flourishing. Arete is based in Minnesota, USA and Mukono, Uganda.

More information can be found at <https://www.areteevaluationcollaborative.com>

APPENDIX C: ARETE EVALUATION COLLABORATIVE TEAM MEMBERS

T. Jordan McGurran (Team Lead and Research Manager) is an international development specialist and evaluation anthropologist with a strong background in evaluating livelihoods, community development, and educational programs. He is a graduate of the Master's program in Organizational Leadership, Policy, and Development - Evaluation Studies at the University of Minnesota with concentrations in international/intercultural education and global public health. Before this, he completed his undergraduate studies in Bible and Theology and Philosophy/Anthropology with a certificate in Human Needs and Global Resources from Wheaton College in Illinois. He is the founder and President of Arete Evaluation Collaborative and leads many projects conducted by the Collaborative. Additionally, he works as the Research, Evaluation, and Learning Program Manager for Uganda Partners in Mukono, Uganda as well as the Assistant Director for the Centre of Global Engagement at Uganda Christian University. Before this he worked as a Research Assistant in the Social Justice, Research, and Policy Department in Catholic Charities - Minneapolis & St. Paul. As an evaluator, he seeks to help people form organizations and policies in order to better promote personal and structural flourishing and to be able to develop practical wisdom oriented towards the common good. TJ lives in Mukono, Uganda.

Randika Lawson De Mel (Baseline Evaluation Project Manager) is a graduate of the Master of Development Practice (MDP) in International Development program from the Hubert H. Humphrey School of Public Affairs at the University of Minnesota, Minnesota, USA. Additionally, he has a Master of Science in Public and Nonprofit Institutions from St. Cloud State University, Minnesota, USA. For his undergraduate degree, Randika obtained a dual degree in Finance and Supply Chain Management from W. P. Carey School of Business at Arizona State University, Arizona, USA. Randika is an Evaluator and Researcher that focuses on rural livelihoods, agriculture, public health, and education. His work experience includes monitoring and evaluation and research projects in the USA, Kenya, Philippines, Jamaica, Senegal, and Sri-Lanka with non-governmental organizations, local nonprofits, and higher education institutions. Using evaluation and research, he wants to help nonprofit organizations to manage their programs effectively and efficiently in ways that benefit their targeted communities. Currently, Randika is also a Secretariat Member of the Sri Lanka Parliamentarians Forum for Evaluation (SLPFE). Additionally, he is a Director for his family company in Sri Lanka (H L De Mel & Company Private Limited) that focuses on plantation management and rural agricultural development, since it was established in 1870. He lives in Colombo, Sri Lanka.

A. Nathalie Manga-BADJI (Research Lead 1) is a Dipl. Agr. Ing. from the Technical University of Munich with different certifications in international development and evaluation from Humboldt University, Claremont Graduate School, and Antwerp University. She is a program

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quality evaluator with 14 years of experience, as an embedded staff or external consultant in advising, program planning, strategic monitoring, learning and monitoring systems development, as well as evaluation. Her thematic areas of expertise include: governance, livelihoods & resilience, humanitarian conflict, transformation, and gender and women empowerment in an African context. She is an enthusiast of evaluation promotion, including as a member of, and leader in, several Voluntary Organizations of Professional Evaluators, VOPEs, with a great eagerness to strengthen her own expertise and others. Additionally, she has been professionally active in Senegal, including in her home region of the Casamance, where she has developed excellent networks and work relationships related to monitoring and evaluation in the context.

Julie A. Warner (Research Lead 2) is a monitoring and evaluation professional with a broad focus on citizen engagement and community change. In the United States, she worked with immigrant groups to learn how they adapt to new surroundings, and with communities who address divisive issues through relationship building and dialogue. Internationally, she worked with organizations that train civilians in ceasefire monitoring, protect civilians from violence in conflict-affected countries, and support community development in post conflict countries. Julie gained her experience managing projects for international and US-based community organizations, government, and private consultants; planning events and leading international tours; engaging with communities and organizing; and in technical writing and research. Julie served as project manager for environmental consulting firms for 15 years, where she applied a background in natural science with knowledge of environmental regulations to conduct site investigations and remediation of contaminated properties for public and private clients around the US. She completed a Master of Public Affairs degree at the Humphrey School of Public Affairs, University of Minnesota in 2009, focusing on global sustainable community development. In 2016, she completed a Professional Certificate in Program Evaluation at the University of Minnesota, while gaining experience conducting practical, participatory evaluations for local nonprofits. Julie currently resides in St. Paul, Minnesota, USA.

Ya Cor NDIONE (Research Associate) is an economist and researcher in the West African research think tank Initiative Prospective Agricoleet Rurale (IPAR). She began to work with IPAR as a research assistant in a program on labor markets and internal migration in West Africa (Burkina Faso, Mali and Senegal) funded by IDRC and FDA. As a young professional researcher and evaluator, she has been working for six years in the field of development economics and has experience in evaluation and research teams on behalf of international organizations, including USAID, World Bank Group, Management System International (MSI), and JICA. She has been also involved in an impact evaluation research team with PEP on the topic of migration, remittances, labor market and human capital in Senegal. Additionally, she was also involved in the baseline data collection for Warehouse Receipts Systems (WRS) and traceability standards project in Côte d'Ivoire, an impact evaluation done for the International Finance Corporation (IFC). She now works on specific research projects to address key challenges of labor markets and

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employment mainly for rural population and youth in agriculture. Recently she was tasked with conducting an in-depth study on employment opportunities in the irrigated rice value chain of Senegal River Valley. Besides her past work experience, she defended her PhD at Cheikh Anta Diop University of Dakar in early February 2018. She has also obtained a Master's degree in Development Practice (MDP) in 2012 and a Master's degree in Economics in 2010. She is based in Dakar, Senegal.

Mame Mor Anta Syll (Impact Evaluation Lead) is an impact evaluation study coordinator and a PhD student in Economics at the University Gaston Berger of Saint-Louis and at the University of Orleans in France. As part of the preparation of his PhD dissertation, focusing on the analysis of the demand for agricultural weather index-based insurance in Senegal, he successfully responded to a call of proposal with a team he currently coordinates launched by the International Initiative for Impact Evaluation (3ie) in 2016 to evaluate the impact of agricultural insurance on Senegalese farmers related to the groundnut basin of Senegal. After a first year of formative evaluation for which 14 teams were granted all around the world, the team he coordinates and co-leads is one of the 6 selected to conduct a second phase of 5 years using impact evaluation methods of Propensity Score Matching alongside Double Difference/Difference in Difference. Besides his impact evaluation work, Mame Mor is also a teaching assistant at the University Gaston Berger and at the Virtual University of Senegal. He is expected to get his PhD degree by the end of 2018. He lives in Dakar, Senegal.

Sashan Rodrigo (Quantitative Analyst and Editor) is a graduate of the Master of Science, Technology and Environmental Policy (MSSTEP) from the Hubert H. Humphrey School of Public Affairs at the University of Minnesota, Minnesota, USA. Further, he has a Master of Science in Public and Nonprofit Institutions from St. Cloud State University, Minnesota, USA. For his undergraduate degree, Sashan obtained a Bachelor of Science in Civil Engineering from the University of Texas at Austin, Texas, USA. Sashan is a consultant in water research that focuses on urban livelihoods, agriculture, water policy, the water, energy, food, and ecosystem nexus, water conservation, water education, and water governance and institutions. His work experience includes research projects in the USA, and Sri Lanka with non-governmental organizations, local nonprofits, and higher education institutions. Sashan is also a freelance writer for Lanka Monthly Digest on water technology issues, and consults with the International Water Management Institute on various water projects internationally and nationally. Sashan lives in Colombo, Sri Lanka.

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APPENDIX D: OVERVIEW OF FORMAL GOVERNANCE AND ORGANIZATIONAL STRUCTURE SUPPORTING THE CASHEW VALUE CHAIN IN EACH COUNTRY

Following is a brief description of government, interprofession organizations, and NGOs that seek to coordinate and build the cashew value chain in each country.

Senegal

In Senegal, the Ministry of Agriculture and the Ministry of Environment and Sustainable Development oversee the cashew sector primarily by providing training and advice in best practices to producers. The Department of Water and Forests (Ministry of Environment and Sustainable Development) has cashew seedling production farms in cashew growing regions. They provide the seedlings at a subsidized price or often at no cost to producers.

PADEC (Programme d'Appui au Développement Économique de la Casamance) is located within the Ministry of the Environment and Sustainable Development. Funded by the government of Canada, PADEC operated from 2010 to early 2018. Its objective was to assist smallholder producers in Casamance by increasing production, processing, and marketing for a range of agricultural crops, including cashew. PADEC built a formal structure composed of key organizations involved in the cashew sector including relevant government ministries, research institutes, and NGOs.

FNDASP (Le Fonds National de Développement Agro-Sylvo-Pastoral) is a national development fund supported by public and private sources that focuses on the agricultural sector, including cashew. FNDASP aims to assist the scale-up of new technology, and provide training and assistance to producers and producer organizations.

CAC (Coopératives Agroalimentaires de la Casamance) is an association of small RCN and cashew apple processors created in 2014 with assistance from PADEC. Its goal is to assist members with local and international product marketing. Some of the original members are no longer active and others only in limited capacity. CAC has 3 offices, but only CAC-Sedhiou focuses on cashew.

CRCOA (Cadres Régionaux de Concertation des Opérateurs de l'Anacarde) is an organization started by PADEC to serve all cashew value chain actors in the Casamance regions of Sedhiou, Kolda, and Ziguinchor.

COFAC (Cadre de Concertation des Opérateurs de la Filière Anacarde de la Casamance) serves to oversee the CRCOA organizations in Casamance.

AJAC (Association des Jeunes Cultivateurs de Casamance) –Provides training and capacity building to young producers of all agricultural crops, including cashew. The organization does some processing of RCN, or did so in the past.

The Gambia

In The Gambia, the Department of Agriculture provides producers with technical advice and capacity building about cashew cultivation. The Ministry of Trade, Industry, Regional Integration and Employment oversees policy formulation, and has collaborated with the NGO and private sector on a range of projects that support the cashew sector. The government focuses on cashew as a major investment crop. The Ministry of Trade is involved with an effort by the government of The Gambia to negotiate with the Government of India to allow processed cashew into India. The Ministry of Trade is also creating an SME (small and medium-size entrepreneurs) fund to help producers and entrepreneurs in the agricultural sector, including cashew.

CAG (The Cashew Alliance of The Gambia) is the apex organization for all cashew stakeholders, but focuses primarily on producers and value addition. CAG is a membership organization that includes other organizations and associations. It focuses on activities that capacitize stakeholders, especially producers. CAG was an important stakeholder in the former Farmer Field Schools initiative, extensive training programs for producers. CAG also collaborates on a market information system where producers receive text messages on current price and supply of RCN.

Guinea-Bissau

ANCA (The National Cashew Agency) has regulatory function over the cashew sector and is located within the office of the Prime Minister. ANCA creates policy concepts for the strengthening of the value chain, and conducts capacity building for sector actors. One project involves the African Cashew Alliance (ACA) and the Private Sector Rehabilitation & Agribusiness Development Project (PRSPDA) who collaborated with ANCA on the creation of a cashew marketing information service that will be implemented for the 2018 season.

The Ministry of Finance authorizes a license to cashew traders or middlemen who operate in the countryside. The Ministry of Commerce tracks information of the trading and export of RCN

CCIAS (The Chamber of Commerce, Industry, Agriculture and Services) is located within the Ministry of Commerce and participates in trade policy formulation. It is funded through a tax on cashew exports. Its members include cashew buyers, resellers, and exporters.

The Cashew Exporters and Importers Association represents both the Bissau-Guinean exporters and the foreign importers of raw nuts from Guinea-Bissau.

ATC-Caju represents both artisanal processors and larger commercial processors. It also operates the CPC (Centro de Promoção do Caju), a demonstration processing plant and training center for small-scale processors.

ANAG (The National Association of Farmers of Guinea-Bissau) is a network of producers in all agricultural sectors. ANAG is present in all regions of the country, and includes extension agents and trainers.

KAFO is a national farmers' federation. In addition, a series of regional producer cooperatives exists in Oio and Cacheu. These organizations all provide technical advice to producers and arrange the collective sale of cashew.

ADPP (Ajuda de Desenvolvimento de Povo para Povo) is an NGO that owns cashew farms and lends the cultivation to individual producers. It also organizes producer groups in villages and arranges for collective sale of RCN.

APPENDIX E: DETAILS OF DATA COLLECTION METHODS

Arete cross-referenced different types of data in order to identify comprehensive, credible findings from the baseline evaluation. To analyze the qualitative data, data collected from key informant interviews and focus group discussions was analyzed using a manual coding process, sometimes called a “hand coding” method using both pen and paper, alongside the qualitative software MAXQDA. The quantitative analysis software STATA was used for analyzing quantitative data from the household producer and enterprise surveys. The quantitative survey data was cross-tabulated, for the time series data as well as the Propensity Score Matching, and the Difference in Difference/Double Difference quasi-experimental data.

Fieldwork

We worked with 27 total enumerators and translators throughout the data collection, though with varying numbers of enumerators in different parts of the project (See Table E1). In Ziguinchor and Sedhiou, we had 20 enumerators doing household cashew producer surveys, and 6 enumerators helping with translation, focus groups, key informant interviews, and enterprise surveys. For both Gambia and Guinea-Bissau, we reduced the number of enumerators that we used, as the required amount of sampling for the household cashew producer was much smaller in both places. In Gambia, we had 9 enumerators total, with 7 conducting household cashew producer surveys and 2 helping with translation, focus groups, and key informant interviews. And finally, in Guinea-Bissau, we had 11 enumerators total, with 8 conducting household cashew producer surveys and 3 helping within translation, focus groups, and key informant interviews. Due to the accident we experienced, four enumerators ceased working with us due to physical or emotional injuries, and we later added one additional enumerator to assist us with translations and for the enterprise survey; this enumerator had previously worked with Arete in 2017 on the SFL-Rural Roads Project. We still had a sufficient number of enumerators to complete the work, but with the lost time and with fewer enumerators, our work went more slowly than we anticipated. We used 20 TaroWorks-enabled tablets throughout the project, especially for the household cashew producer survey, though we lost two tablets in the car accident and faced technical/mechanical issues with another two of them.

Table E1: Number of Research Assistants for Each Section of the Research

	<i>Producer Household Survey Enumerators</i>	<i>Household Survey Supervisor</i>	<i>Qualitative Assistants</i>	<i>Qualitative Supervisor</i>	<i>Enterprise Survey Supervisor</i>	<i>Total</i>
<i>Casamance</i>	18	2	4	1	1	26
<i>Gambia & Fatick</i>	6	1	1	1	-	9
<i>Guinea-Bissau</i>	6	1	3	-	1	11

Quality Control and Ethical Guidelines

The Arete Team took the following procedures below to ensure data quality and to maintain ethical standards during the baseline evaluation:

- The SFL staff reviewed the survey instruments and interview protocols used in the field and their feedback was incorporated.
- The Arete team conducted data collection training from 5th to 10th March 2018 for enumerators to ensure that the same evaluation tools were used among all data collectors.
- During the data collection training, the enumerators were provided the opportunity to provide feedback to enhance the contextual and cultural relevance of the evaluation tools.
- Before the start of the data collection, the survey instruments and interview protocols were translated into French, and their delineation into the major local languages was (Wolof, Mandingo, Creole, Diola and Peuhl) discussed. Because of the variability of languages in the areas of the study, we had to form a team composed by people who can speak the local languages of the farmers and other stakeholders that we were to survey. We discovered during the discussion with the enumerators that, despite the plurality of the ethnics and the languages in the localities of the study, some languages were quite common and could stand as languages we could commonly use. These included Mandingue and Wolof in Senegal and the Gambia. For Guinea Bissau, Mandingue could also be used, but Creole was the most popular language. We based the selection of our enumerators for both Gambia and Guinea Bissau on the basis of the languages they spoke, and, in fact, most of our enumerators were from the Casamance and therefore they could speak Wolof and Mandingue very well, and a few could even speak Creole. Thus, we did not have any language difficulties for Gambia and Casamance. And for Guinea Bissau, in addition to the supervisor who spoke Creole, we selected only the enumerators who speak Creole; so, we did not have any difficulties in that locale either.
- The survey instruments and interview protocols were pilot-tested before the start of the

data collection.

- When required, the Arete Team members had a translator to aid in translation or understanding during data collection.
- For the household and enterprise surveys, the Arete Team asked for consent from participants before proceeding with the survey questionnaire.
- For FGDs and key informant interviews, the Arete Team had an informed consent form (Appendix F) asking for the voluntary participation of all stakeholders.
- The Arete team worked within the American Evaluation Association Guiding Principles¹ for Evaluators throughout this baseline evaluation.
- The Arete sought to remain in close contact with SFL and to be responsive in replying to any inquiries that SFL had. Additionally, Arete sought to exemplify kind, patient, and thoughtful engagement with SFL as much as possible.
- The Arete team maintained confidentiality of all the data collected and took necessary proactive steps to not jeopardize anyone's identity. For example, all qualitative and quantitative data collected for this evaluation project is stored in the password-protected Arete Team Google Drive. Only the Arete Team members have access to the drive. This includes CSV files provided by the SFL staff member who has access to the TaroWorks database.
- Specific quality control steps taken for the household cashew producer survey are discussed in Appendix F.

Document Reviews

Arete reviewed the documents provided by SFL during the inception phase to learn about the LIFFT-Cashew project and gather any relevant qualitative and quantitative data regarding the project. These documents include the Strategic Analysis document, the M&E Plan, and the Final Evaluation report of the SeneGambia Cashew Value Chain Enhancement Project. Additionally, the Arete team also reviewed the Cashew Value Chain Study by TechnoServe to highlight potential opportunities and strategies for program implementation. The Arete team also delved into available sources on the cashew farming practice and the cashew value chain for better thematic and contextual understanding.

Key Informant Interviews and Focus Group Discussions

The Arete team used purposive sampling, a non-probability technique, to select individuals for key informant interviews and focus group discussions (FGDs) whose knowledge, expertise, and participation provided a diverse set of views along the cashew value chain in SeGaBi region. The main purpose of the key informant interviews and FGDs was to gather general information about

¹ American Evaluation Association. American Evaluation Association Guiding Principles For Evaluators. Retrieved from <http://www.eval.org/p/cm/ld/fid=51>

context, circumstances, and key stakeholders before the project is formally implemented. All together, the interviews and focus groups provide a rich, in-depth, and inclusive view of the entire chain not only at present, but also in anticipation of the impact that the LIFFT-Cashew project may have on further development of the value chain.

Prior to conducting key informant interviews and focus groups, the Arete team developed a set of protocols, or lists of basic questions, for each of the sectors. All protocols contained the same, or very similar questions in order to gather consistent data across the value chain, but depending on the sector, certain questions were emphasized over others. For key informants,² protocols were developed for:

- 1) Cashew kernel processors (Appendix Q),
- 2) Cashew related enterprises (Appendix R),
- 3) Financial institutions (Appendix S),
- 4) Cashew traders and exporters (Appendix T),
- 5) Government officials and community leaders (Appendix U), and
- 6) USDA staff and SFL staff (Appendix V).

For focus groups,³ protocols were developed for:

- 1) Cashew farmers (Appendix O) and,
- 2) Cashew related enterprises (Appendix P).

Protocols were translated into French and Portuguese. A focus group protocol was also developed for SFL to use with CFW laborers (Appendix N) at a later time. The Arete team did not conduct focus groups with current CFW laborers as they had not yet been selected as the project had not yet commenced, but did interview a group of potential CFW laborers.

The key informant interviews and focus groups were conducted in the preferred language of the interviewee(s). An Arete interviewer led the conversation. Translation was provided as needed by an Arete translator, and the interviewer and translator took notes. Everyone we talked to was willing to be interviewed, but only a few interview participants were willing to not be recorded. For interviews that were not given permission to be recorded, the Arete team took hand written notes.

²A key informant interview is a loosely structured one-on-one exchange between the interviewer and the person being interviewed. The interviewer relies on a list of open-ended questions to guide the discussion, meant to be more of a conversation that allows for a free flow of ideas and information. Depending on answers to the questions posed, the interviewer may probe deeper for more nuanced information.

³A FGD follows a similar format, but involves a group of, ideally 8 to 10 people with similar knowledge, expertise, and participation in the cashew value chain. The interviewer facilitates a conversation using a series of guiding, open-ended questions, and participants interact with each other in their responses to questions. Given participants' responses to questions posed, the interviewer will probe for additional details.

After interviews, notes and transcripts were written up, and each was coded using hand methods in accordance with a predetermined coding structure that corresponds to the components and subcomponents of the LIFFT-Cashew project.

The majority of the key informants interviewed were men. Arete found it difficult to identify many women with official positions in the value chain as most are men. However, Arete conducted focus groups with women producers, women-owned processing cooperatives, and women workers at a processing facility.

As shown in Table E2, Arete interviewed a total of 57 key informants across the 3 countries, including a few additional persons outside of West Africa; occasionally these interviews were done in groups of informants, but typically they only involved one key informant.

Table E2: Number of Key Informants Interviewed in Each Country

	Senegal	Gambia	Guinea-Bissau	Others	Total
USDA/SFL staff	5	-	-	1	6
Cashew processors	2	1	-	-	3
Cashew-related enterprises	3	1	-	3	7
Cashew traders & exporters	3	-	3	-	6
Cashew value chain organizations	8	1	9	-	18
Financial institutions	3	-	1	1	5
Government officials/community leaders	7	2	3	-	12
Total	31	5	16	5	57

Arete conducted a total of 23 focus group discussions across the 3 countries as follows (See Table E3 for a regional breakdown):

- Senegal
 - Cashew producers (2 women groups, 5 mixed men and women, 1 men and male youth group)
 - Women cashew processor cooperatives (2)
 - Women cashew workers at a processing facility (1)
 - Women cashew enterprises (2)
 - Leaders of a Senegalese cashew association (1)
 - Potential Cash-for-Work Laborers (1)
- The Gambia
 - Cashew producers (4 mixed men and women groups)
 - Women cashew processor cooperatives (1)
- Guinea-Bissau

- Cashew producers (2 mixed men and women groups, 1 men groups)

Table E3: Number of FGDs Conducted by Country and Region

Country	Region	Total
Senegal	Ziguinchor	10
	Sedhiou	2
	Kolda	1
	Fatick	2
Gambia	Lower River	3
	North Bank	1
	West Coast	1
Guinea-Bissau	Cacheu	1
	Oio	2
Total		23

Enterprise Survey

The Arete team conducted surveys with enterprises that engaged with the cashew value chain, primarily cashew kernel processors in the intervention regions of SeGaBi. The Arete team interviewed 13 enterprises in Senegal, 7 in the Gambia, and 6 in Guinea-Bissau. The enterprise survey questionnaire was intended for the small and medium enterprises (particularly cashew processors) and other cashew-related enterprises targeted as beneficiaries in the LIFFT-Cashew program. The purpose of the enterprise survey was to assess the impact of infrastructure, access to finance, and market linkages on the viability of businesses as well as the expansion of the trade of cashew. The survey was designed to be longitudinal and non-experimental. Due to the fact that the number of cashew kernel processors is currently low in the region, all mechanized and semi-mechanized kernel processors were targeted for the survey in order to get a better overall representation based on the enterprise lists that SFL made available to the Arete team; artisanal or household processors were not systematically targeted based on the goals of the program. Thus, the team was able to survey 26 enterprises in the SeGaBi region (see Appendix Y for the list of enterprises surveyed).

The Arete team designed the enterprise survey, and the SFL staff later reviewed the survey and their feedback was incorporated by the Arete team. Additionally, the enumerator trainings and the

piloting of the enterprise survey were used to further improve this survey before the commencement of the fieldwork. The survey was translated by the Arete team from English to French; a copy of the English and French versions of the enterprise survey can be found in Appendix M. The survey was conducted as a survey interview with survey participants by the Arete team. Three enumerators in Senegal and one enumerator each in Gambia and Guinea-Bissau assisted with the data collection of the enterprise survey. The enterprise survey data was collected using TaroWorks as a mobile data collection tool and stored in Salesforce, which will house LIFFT-UP, SFL's data platform. The Arete Team completed the cleaning of the data and the computation and analysis were done using STATA quantitative software alongside Excel.

Household Cashew Producer Survey

The household cashew producer survey questionnaire was developed following the four different components of the program intervention. Overall the questionnaire had a total of 236 items, including introduction, questions, and other information such as GPS location and photos. The general framework of the producer questionnaire used to collect the data at the farm level is described in Table E4.

Table E4: Framework of Producer Questionnaire

Section Title	Description
Introduction	This section introduced the survey purpose to the producer after the salutations and asked for consent to take the questionnaire. An approval to take a photo was also asked before the start of the survey. If the informant did not consent to allow a photo to be taken of him/her, the photo was not taken, though the survey would continue. If he/she did not consent to complete the survey, the interview was stopped and enumerators thanked him/her before leaving.
Identification of the producer	In this section, information related to the producer's location, his/her name, and position in the household or relationship with the household head were asked. The treatment status was also based on the use of the village as the treatment unit in the study, though the producer was not told about this treatment status.
Housing facilities & Asset Estimation	Here, the livelihoods of the household in which the producer belongs were collected. The purpose was to gather enough information on the living standards of the producer's household to be able to compare him with other cashew farmers for matching and propensity scores calculation.
Market Infrastructure	In this section, the questions concerned specifically production and transportation. The roads used for production and commercialization

	were then investigated. Questions related to the production volume and price for the commodities sold by the producers (which were RCN and cashew apple juice) were also asked.
Financial Services	This section informed the baseline level of access to financial products, with questions about loans and savings. For loans, the source, amount, reason for the loan, and the experience of refusal were also investigated.
Market Access & Linkages	This section asked about membership to farmers' organization and service received from that farmers' organization. Also, questions about social capital and network linkages were asked to investigate more about the types of present relationships related to the market.
On-farm Practices Yield & Technology Adoption	This section included knowledge about new agricultural techniques and practices, new management practices, the change in the volume of production observed, and the reason of the change. Questions were also asked related to the acceptance of and participation in training sections related to new agricultural practices and farm management in the past, in order to gather information about the baseline level of these indicators.
Demographics	Information about marital status, level of education, ethnicity, and household size and composition were gathered in this section.

1. Sampling method

The method of sampling used as part of the producer survey was twofold: there was one sampling procedure for the impact evaluation and another sampling procedure for the performance evaluation. For the impact evaluation, the list of clusters that were used to divide the divisions of the sampling was informed by the SFL road selection information and assessment results; the proposed roads to rehabilitate provided the name of the villages that may benefit from those roads and the name of villages that might not. Since the numbers were not too large, all of the villages that were near the roads were included in the QED. However, for the selection of the producers to survey within villages, we proceed to do a random selection based on the lists from IRD's previous work with cashew farmers in the region in order to ascertain the village for which there were more than 10 cashew farmers. If the village was listed in the QED villages to survey and the village also had less than 10 cashew farmers in the IRD list, all the listed persons were selected. For the performance evaluation, we proceeded to do a two-level of random selection. First, we selected the villages to include in the survey randomly stratifying at regional and departmental level and then we selected the number of individuals to survey per cluster from the list of villages first

selected. But the last step of selection at village level was only possible for the Senegal and the Gambia countries where a census of the cashew farmers was available. We used the systematic sampling approach during the baseline survey whenever a list that provide a census of the cashew farmers to survey in a village was not available; we relied primarily the the IRD work on a cashew producer census to have this data. This was the case of few villages among the list of the villages provided by SFL and for all the villages of Guinea-Bissau because Guinea-Bissau was not covered by the IRD study and thus we did not have a census of the cashew farmers available.

The following steps describe exactly how we proceeded when the list of cashew farmers was not available for a village beforehand:

1. We first identified those villages for which we did not have the list of the cashew farmers before the visit of the village
2. Once in the village during the survey day, we ask to the village chief whether the number of cashew farmers in the village is important (larger than 8-10 farmers) and whether he knows them all (whether he could provide us with an exhaustive list of them).
3. If the number of cashew farmers is less or equal to 8-10 farmers, we ask the village chief to list them and we survey them all.
4. If they are more than 10 and the village chief knows them all, we ask him to list them and we randomly select from the list 8-10 cashew farmers using the "My Random" sampling application.
5. If the chief of the village was not able to provide the list of the cashew producers in the village and we have no other way to get an exhaustive list, which was mostly the case for Guinea Bissau, we proceeded to a systematic sampling which consisted in :
 1. Selecting the first house of the village from the entrance as a starting point
 2. Estimate approximately the number of houses in the village
 3. Define the number of houses, we typically used 8 households, to skip in order to have the desired number of cashew farmers in every house that will be selected
 4. Visit the houses and interview one cashew farmer per house (if there is more than one in the house, we list them all and randomly pick one) while respecting the skips.
 5. While going around around the village, if there is a house in which there is not a cashew farmer, we replace it by the house that come just next to make sure we have at the end the desired number of cashew farmers

The advantage of this systemic sampling procedure is that it does not need knowledge of the size of the population, but only a general idea of the size of the population is needed to select the number of individual to skip for the selection of the participants.

a. Sampling frame

The target population of the study is the farmers of the countries of Senegal, Guinea Bissau and Gambia who are cashew producers. They are located mainly in the regions of Ziguinchor, Kolda, Sedhiou, and Fatick for Senegal; Oio and Cacheu for Guinea Bissau; and the regions of Lower River, North Bank, and West Coast in Gambia. The participants to the survey were therefore selected from the dataset of the census of the cashew producers' population in Senegal and Gambia conducted by the IRD project, except for Guinea Bissau where those IRD data does not exist. More specifically, all of these regions of the three countries contributed in the estimation of the baseline indicators. However, as part of the quasi-experimental method designed to evaluate the impact of the Component 1: Activity 1 Feeder and Connector Road Rehabilitation and Construction, the regions of Sedhiou and Ziguinchor provided the target population on the basis of a list of villages that may benefit from the roads that will be rehabilitated. Table E5 below summarizes the repartition of the survey participants and their villages per country, region, and treatment group.

Table E5: Summary of Sampling Frame by Country and Region for Household Producer Survey

Country	Region	Number of Villages	Cashew Farmers Receiving No Treatment	Treatment A cashew Farmers	Treatment B or Control Cashew Farmers	Total Number of Cashew Farmers
Senegal	Fatick	7	56	0	0	56
	Ziguinchor	21	63	26	82	171
	Sedhiou	65	15	242	376	633
	Kolda	7	60	0	0	60
Total Senegal	4	100	194	268	458	920
Gambia	West Coast	4	41	0	0	41
	North Bank	6	48	0	0	48
	Lower River	6	48	0	0	48
Total Gambia	3	16	137	0	0	137

Guinea Bissau	Cacheu	12	96	0	0	41
	Oio	11	88	0	0	48
Total Gambia	2	23	184	0	0	184

b. Sample size (initial estimation and final achievement)

• *For the Quasi-experimental Design*

For the impact evaluation branch of the study, the Arete team used the Microsoft Excel®-based 3ie (International Initiative for Impact Evaluation) sample size and minimum detectable effect calculator⁴ to develop the sample size calculation. Since the research question regards the impact of rehabilitated roads on linkages in the value chain, we compared the units of treatment, villages, with the same potential of being impacted by the rehabilitated roads. Those villages should be the one with the same characteristics namely villages that are not already benefiting from good roads that already exist. Some of those villages were provided by SFL to constitute the treatment sample as they were going to benefit from rehabilitated roads based on SFL's current rehabilitation schedule. The other villages with the same characteristics (i.e. villages of the same communes and same characteristics of the inhabitants as the villages that will benefit from the roads) stood for the control population as they have no rehabilitated roads yet and the intervention scale of this project does not make it possible to provide them with rehabilitated roads based on SFL's current rehabilitation schedule. As an outcome variable to take into account in the calculation of the sample size, we used the proportion of cashew farmers that will be able to shift from low-price sellers (farmers selling their production at a low price) to high-price seller (farmers selling with a better/fair price) as a result of the LIFFT-Cashew project. On average, we assumed that the intervention would enable a reduction of 50% of the rate of low-price sellers (from 60% of the intervention population as low-price sellers in the beginning to 30% of the intervention population to be low-price sellers at the end, for example). We also chose a desired significance level of 1% and a desired power level of 90% in order to increase statistical power of the study. We used the "rule of common supports overlap" to ensure to the extent possible that persons of same characteristics will have the same chance of being in the treatment and the control group, and for this the control groups needs to be well targeted and large enough. Because we targeted the control group, by selecting villages of the same communes as the treatment villages, to increase similarity between the treatment group and the control group and to make sure that enough persons participating in the survey would be as similar as possible for the purpose of comparison, we formed a control group that was two times larger than the treatment group.

⁴http://www.3ieimpact.org/media/filer_public/2016/03/22/3ie-sample-size-minimum-detectable-effect-calculator.xlsx

After clustering at the village level with a number of observations per cluster of 7 cashew farmers, the number of required clusters was then estimated to be 27 villages for each of the treatment and the control samples. But as we aimed for the control sample to be twice larger, we needed to either double the number of clusters in that group or the number of individuals per cluster. As we initially estimated that the villages may be too remote from one another and the budget may not allow in terms of logistics to double the number of clusters, we chose initially to allow the number of individuals per cluster in the control sample to be twice as larger (i.e. 14 cashew farmers instead of 7).

However, the actual number of roads to be rehabilitated in the Ziguinchor and Sedhiou regions and also the listing of the villages that would benefit from those rehabilitated roads provided only 26 villages for the treatment sample. But Arete received from the SFL road selection information and assessment results enough names of eligible villages that could stand for control unit and that are not as remote from one another as we firstly had initially estimated. We then decided to double the number of cluster or villages in the control group rather than the number of individuals per villages for a better statistical power. To take into account the attrition level of 15% expected during follow-up and end-line, we needed to survey 8 producers per cluster rather than 7. But to make sure that the desired number of 7 or 8 producers per village would be achieved, we deliberately increased that targeted number to 10 during the actual survey. However, after having studied the list of potential villages for the control group provided by SFL and considering the budget constraints, we eliminated some villages that were not found in the IRD cashew farmer list and those where security was not guaranteed.

Table E6 below provides a summary of the number of individuals and villages we initially intended to survey and the number of we actually interviewed for the Treatment A and Treatment B, control, groups. It also gives the total number of farmers interviewed as part of the QED. Due to several reasons, ranging from not being able to find targeted individuals to not being able to identify people of a village who live now in another location due to security reasons, the final target of 10 farmers per village was not always reached as we expected. But out of the 26 villages surveyed in the Treatment A sample, only one, Espagne with 5 cashew farmers, did not reach the critical number of 7 cashew farmers surveyed. For the control group, only one village, Labisene with 4 cashew farmers, was short of 7. For the performance evaluation, we followed a rule that consisted of automatically replacing through our randomizing process the individuals who were not found. The objective was just to survey randomly selected inhabitants of a village if they were available at the moment of the survey; since our work was not a census, replacing does not impact the statistical power of the sampling method if the random selection rule is respected throughout the process.

Table E6: Summary of the Number of Individuals⁵ Interviewed as part of the QED

	Initial Targets	Actual Targets Surveyed
Number/Mean number of farmers per cluster for treatment group (A)	8	10.34
Number/Mean number of farmers per cluster for control group (A)	8	9.32
Number of clusters (villages) for the treatment sample	26	26
Number of clusters (villages) for the control sample	52	49
Number of cashew producers in the treatment sample	208	268
Number of cashew household in the control sample	416	458
Total number of individual as part of the QED	624	726

- ***For the Performance evaluation***

As part of the performance evaluation, the sample size was guided by the scale of the LIFFT-Cashew project intervention between the countries and the general expected level of decision to participate in the program from the targeted population. Based also on the estimated percentage of cashew farmers who are currently low-price sellers (60%), we estimated a total required sample size of 369 cashew farmers to survey for the three countries. We then used the information on the scale of the intervention between countries provided by SFL, namely 40% for Senegal, 35% for Guinea-Bissau, and 25% for Gambia, to split that number between the countries after taking into account also an attrition level of 15%. That yields a total sample of 424 farmers to survey for the performance evaluation with Senegal accounting for 169 farmers, Guinea-Bissau accounting for 148 farmers, and Gambia accounting for 106 farmers.

For the performance evaluation, the Arete team purposively considered a number of 8 cashew farmers to survey per cluster instead of the 10 we considered as part of the impact evaluation. The necessity to reach the sample size and the need to keep the same individuals over the years of the intervention and evaluation is more critical for the QED than the performance evaluation. In addition to the cashew farmers surveyed as part of the QED in Ziguinchor and Sedhiou regions, we purposively added other villages for the performance evaluation from those two regions after SFL's request. The regions of Kolda and Fatick were also included. Table E7 below provides the number of cashew farmers surveyed as part of the performance evaluation.

⁵The values take into account the the 15% attrition rate.

Table E7: Surveyed Cashew Farmers for Performance Evaluation

	Initial targets	Actual targets surveyed
Number of clusters (villages) in Senegal	24	24
Number of individuals surveyed in Senegal	192	194
Number of clusters (villages) in Gambia	17	17
Number of individuals surveyed in Gambia	136	137
Number of clusters (villages) surveyed in Guinea Bissau	23	23
Number of individuals surveyed in Guinea Bissau	184	184
Total number of cluster (villages) for all countries	64	64
Total number of individual surveyed for the performance evaluation	512 ⁶	515
Total number of individuals: QED + Performance Evaluation⁷	1136	1241

Data Collection Limitations

This baseline evaluation is essential and beneficial to the implementation of the LIFFT-Cashew project, though there are some limitations.

Budget Constraints: As a not-for-profit organization, SFL has limited financial resources for this evaluation, which impacted the amount of interviews and surveys to be carried out. The budget is low for a baseline assessment of this size and involving these methods.

Time Constraints: SFL is eager to complete this baseline assessment in order to start their implementation of this program as formal program activities cannot be started until after the baseline assessment is completed. This has made the schedule move forward very quickly, including fieldwork starting very soon after the contract was signed. This has made planning more complicated and difficult, including having time to get money organized for the implementation of the assessment.

⁶ The difference is explained by the fact that we allowed the enumerators to survey all the farmers in villages where the number of cashew farmers recorded is less or equal to 10. In fact for some villages, mostly the villages where the inhabitants have been moved to other villages due to security reasons, we proceed first to a census by interviewing the head of the village before proceeding to a random selection of the 8 participants when the number was more than 10. We surveyed all the cashew farmers when the census revealed that there is no more than 10.

⁷ The four cashew farmers who refused to participate are not included.

Unexpected Constraints/Situations in the Field: The Arete team experienced unexpected difficult challenges during the fieldwork in SeGaBi. For instance, on the morning of 15 March 2018, a vehicle transporting the enumerators got into an accident on their way to Sedhiou, Senegal to conduct the household cashew producer survey. According to eyewitnesses, the driver swerved to avoid a goat and then lost control of the car rolled several times. There were seven enumerators in the car; after the accident, three of them had minimal injuries, while four of the enumerators had moderate to serious injuries. One of the enumerators (Yousouf Thiello) that had serious injuries tragically passed away on the same day. This tragic accident took an emotional toll on the Arete team and it also affected the planned fieldwork schedule, both in time but also in manpower, and also exacted a financial toll on the team. Furthermore, on the morning of 30 March 2018, the enumerators were refused entry to Guinea-Bissau by the Mayor Secretariat of the Prefetof Sao Domingo despite having the authorization letters from the Guinea-Bissau Consulate in Ziguinchor, Senegal. Hence, this unexpected event also affected and somewhat delayed the data collection process, and additionally made added administrative work, i.e. planning, renegotiating the budget, additional data collection coordination, etc., when Arete was working on analysis and reporting writing.

Encountering Enterprises that Were/Are Not Operating: Some enterprises that the Arete team surveyed did not operate in 2017. For example, in Guinea-Bissau particularly, according to a list given by one member of African Cashew Alliance (ACA), there were 25 enterprises specializing in cashew processing (cashew apples and RCN) in 2016. However, the surveyor in Guinea Bissau encountered several enterprises that have stopped processing cashews.

Enterprises Unwilling to Share Information: Some enterprise owners/managers did not want to share information about volumes and revenues related to cashews. This was the case mainly with Indian exporters and the larger processors in Guinea Bissau that thought they did not need any support from a project.

Cashew Producer Survey Constraints: Limitations regarding the conduct of the cashew producer survey were mostly due to the timing of some survey tools. In fact, we had to select the study participants from the IRD list and did not have time to double check whether the villages selected really existed, whether the producers informed are still cashew producers and still living in the actual villages. In fact, we had to deal with several situations in which the name of the village provided by SFL could not be found in the IRD list, and we struggled also to find it on the field. Some villages appeared to be considered by local population and village chiefs as just a neighborhood. In other situations, the people recorded as inhabitants of a village in the IRD list were not living in that village. Finally, some of the producers recorded in the IRD were not cashew farmers in the sense that they did not have a plantation. They said they were cashew farmers during the IRD census because they just wanted to benefit from any aid that could profit to be recorded as resulting from being a as part of that census.

Enterprise Survey Technology Constraints: There were certain difficulties in the collection of data for the enterprise survey. First, the data was primarily collected on paper and subsequently inputted into tablets. Only one tablet was available for the enterprise survey data collection, and

the version of the survey questionnaire in that tablet differed from the latest version of the survey questionnaire. This resulted in a lot of time spent in the survey administration and required regular checking to be sure that the data collected was inputted correctly in TaroWorks.

Technical Issues Encountered During Fieldwork:

- a. **TaroWorks:** During the fieldwork, the Arete team experienced certain technical issues with the application of data collection TaroWorks. Despite the verification of the coherence of the questions through rounds of revisions by the supervisors and the coordinators after the test on the field, some errors were still left. Usually those types of difficulties can be easily overcome when the coordination team of data collection has access to the application and can directly operate some modifications. In fact, we would have like to be able to directly edit the wording and some aspects of the questionnaire directly on the app to reduce risks of confusion and to facilitate the monitoring of the survey. Furthermore, access to the Salesforce database could enable us to operate a closer follow-up of the work on the field and spot eventually the outliers as soon as possible and correct them. Some outliers could also be avoided by just adding controls on some questions. For example, most of the time, in the development of the data collection application a maximum and minimum of price, volume and value is set in such a way that outliers are impossible.
- b. **Devices:** Regarding the devices, the problem the Arete team had was the fragility of the tablets and more specifically the lack of protection of their screens. In fact, due to the nature of the surveys in rural area and the condition in which they are done, it was necessary to have screen protectors, at least, throughout the final process. Unfortunately, the tablets were not fully ready for data collection during the survey as they did not have the required accessories, i.e. covers and screen covers, throughout the whole period of the data collection. Further, two of the tablets were damaged during the car accident, and two more had technical issues.

APPENDIX F: PRODUCER SURVEY DATA QUALITY CONTROL STEPS

Evaluation of the Data Quality

Evaluating the quality of data is an essential step in the survey process. Indeed, the credibility of the indicators collected depends on the quality of the data collected. We present in the following the actions taken by the Arete team prior, during, and after the data collection to ensure data quality and the results of those actions.

1. Actions Taken to Ensure Data Quality: Prior to the Data Collection

- a. A training manual was developed as part of the enumerator training session in Ziguinchor, Senegal. The manual discussed and explained every question of the questionnaire in terms of information it aimed to collect and how to administer it to the producer.
- b. To introduce the enumerators to the study, presentations explaining the LIFFT-cashew project were made during the training and the rationale behind a baseline survey was discussed to familiarize them with the objective of the survey and the information we intended to collect.
- c. A field test in which the coordinator went to the field and participated in the management and the supervision of the group was conducted as part of the training of the enumerators.
- d. 26 of 29 enumerators candidates, who we trained in our preliminary training, were selected to participate in the survey based on the criteria of performance and understanding of the questionnaire after a pilot test conducted in the village of Boutoute in Ziguinchor.
- e. Out of the 26, 19 enumerators were part of the producer survey team with two of them playing the role of supervisors. The other enumerators worked with translation and qualitative data collection.
- f. With the help of a statistician, the coordinators prepared the list of the producers to survey for each of the villages recorded in the IRD census of cashew farmers and their contacts before printing it and handing it to the supervisors.
- g. For the villages that were not found in the IRD census and for Guinea Bissau essentially, other random selection procedures such as the use of the “My Random App” combined with the random skip method for the case in which the number of eligible farmers was not known beforehand. The same procedure was also used for the selection of the survey participants in Guinea Bissau.

2. Actions Taken to Ensure Data Quality: During the Data Collection

- a. Two supervisors with more than five years of experience in impact evaluation surveys were hired to lead the groups on the field.
- b. Ongoing contact between the enumerators, their respective supervisors, and the coordinator 24 hours a day and 7 days a week was established to make sure everything was going well. In fact, Arete organized the teams in such a way that they spent all their days and nights

together in the field and also traveled together with their supervisors. Enumerators directed their questions to the supervisors who had to remain in touch with the coordinator for the harmonization of all the action taken.

- c. Because we struggled to have all the data synced at the right time due to technical reasons, poor access to internet, or delays in receiving reports of the synced data daily, the Arete coordinator and the survey supervisors had daily phone call either at night or early in the morning to discuss the work of the previous day. Beyond these debriefing calls, we also had monitoring calls made to manage the work on the field and overcome obstacles such as replacement of unavailable producers, confusion in the village names, and re-contextualization of the way some questions needed to be administrated to take into account not anticipated characteristics of the population.

3. Actions Taken to Ensure Data Quality: After the Data Collection

- a. We debriefed with the two supervisors on the general performance of the enumerators to have an idea of where to search for potential outliers or bad quality of information.
- b. We proceeded to a call survey of a sample of 70 producers randomly selected by stratifying per commune (2 producers per commune) to check for potential cheating or human-caused errors. That sample represented 6.66% of the total participants.
- c. For values that seem to be outliers (prices and volumes), a check has been made with producers to confirm or correct the information reported by the enumerators. More information on this is available in the data quality analysis section.
- d. We called the supervisors/enumerators to understand the reason behind all the spotted identified outliers. Satisfactory justification was provided for some of them, for example in Gambia some values were informed in Dallassi rather than CFA. More information on this is available in the data quality analysis section.
- e. For the outliers for which we did not have sufficient explanation from the enumerators, we proceeded to a second call test of the producers to confirm or correct the values; we called 16 producers, representing 1.52% of the total participants, as part of this outlier verification.
- f. For values that we could not replace by calling the producer, i.e. producer was not reachable or did not provide a phone number, we proceeded to values re-imputation using statistical imputation methods in STATA. Basically, we formed a program that automatically detects values that seem to be in error and replaces them with a new value, such as the mean of the village. In fact, outliers were in general distributed between the variables and except for the most flagrant of them, i.e. the 16 farmers we called back, any incoherency is simply inherent to the answers of the farmers. For example, when a farmer says that his values of sell was 1 million CFA, yet the average price of sale was 600 CFA per kilo and the volume of sales was 2000 kilos. Because farmers do not always have formal accountability, these mistakes happen and a program will detect these errors by doing the right calculation and replace either the volume or the price or the revenue. In our judgment, generally, in order

to limit low numbers of individuals in disaggregated sub-groups, it is better to use re-imputation methods instead of getting rid of data.

- g. Since the producer survey was conducted separately for the three countries starting with Senegal first, then Gambia, and, finally, Guinea Bissau. We kept at every stage of the survey only the enumerators who were recording the best performance on the field in terms of accuracy of the answers they were reporting and the level of their comprehension of the questionnaire. Their behavior on the field and the criteria of language used in the different survey locales were also determining factors in the choice of keeping them for the different stages of the data collection.

4. Results of the Actions Taken to Ensure Data Quality

- a. Overall, the enumerators contacted 1245 producers. But at the end of the data collection, only 1241 producers accepted to participate to the survey and were then actually surveyed, as a response rate of 99.6%.
- b. During the field test conducted as part of the enumerator's training, we already began to question the attitude and performance of an enumerator that we thought could lead to lack of quality in the collected data. In fact, the enumerator was anticipating the answer of the respondent based on the fact that he knows the value chain and the context. During the implementation of the field test as part of our training, that issue was discussed and the necessity to stick only to the administration of the question and avoid any attitudes that could orientate the answers was emphasized. In addition, the enumerator in question received warnings/corrections individually in a discussion with the coordinator and his supervisor.
- c. The internal analyses of the data in STATA spotted outliers mainly from the producers surveyed by the enumerator who received the warning during the field test. In fact, most of the 16 outliers spotted by the STATA internal analysis came from the enumerator previous mentioned⁸. We called him/her to understand the logic behind the information he/she collected, and then we called back the farmers to have more information about the issue. That audit revealed that the high values were related to a misunderstanding of the instructions. For example, rather than putting the price of the kilogram, the enumerator was putting in his early surveys the total value of sales. The value of the outliers were directly corrected in STATA.
- d. The Arete Team discovered that the high values were concerning the first survey the enumerator completed and he/she was not asking the question very well due to a lack of understanding. He/she received later the correction of the supervisor and the supervisor later suggested that we not hire him after the end of the first contract of 10 days in Senegal

⁸He used the SFL enumerator 1 username but since the username existed for two persons, we were not sure that he collected the data on all the 16 farmers. Because he recognized that by mistake, he interpreted the questions about prices and volume differently, and the other enumerator told us that it was not his case, we deducted that may be all of the 16 outliers came from him.

due to his/her lack of quality performance. That enumerator was then sanctioned and we did not select him/her for the Gambia and Guinea Bissau team.

- e. The two round of phone calls made for data quality control were done: first call of the 70 producers randomly selected from all the intervention and the second call of the 16 producers for which the outliers coming from the warned enumerators were identified.
- f. In the verification of the effectiveness of the survey carried out with a sample of 70 producers, 6.6% of the surveyed population, across sampled villages, we found three producers who declared not to have been visited by the investigators. One of them called back to correct his answer and confirm that he was surveyed and with the enumerators, the answer of the two other were refuted by the supervisor and the enumerator who said that the two cashew farmers had both had been interviewed. In light of this, two factors that may have caused a discrepancy is that our independent enumerator that we hired to help conduct our checks may have made a mistake in asking the question or it might be possible that the farmers may have been lying. To avoid issue of arguing between the farmers and the enumerators, we did not reveal the identity of those farmers and closed the verification considering the response of the supervisor and the enumerators who confirmed that those two farmers were surveyed.
- g. The quality of the data we have in Guinea Bissau benefited from both the highly skilled enumerators as well as the fact that the survey team was able to be debriefed about all the difficulties and errors that were spotted during the Gambia and Senegal survey; this means the Guinea Bissau data might be the strongest data set we have among the data collected in the three different countries.

APPENDIX G: QUALITATIVE DATA ANALYSIS CODING PLAN

Coding is a process of systematically and somewhat subjectively organizing qualitative data into categories of ideas, concepts, or themes, that correspond in some way to the key components of the activity in question. Each category is a code, and each code is labeled with a word or phrase. The coding process is the heart of analyzing qualitative data. It allows the evaluator to create an organized picture of what is happening, and facilitates the reporting of outcomes to relevant stakeholders.

Arete chose as initial codes, the 4 key components of the LIFFT-Cashew project; 1) Infrastructure; 2) Finance; 3) Market access and linkages; and 4) On-farm practices. Each of the 4 components has sub-components that were identified as sub-codes. For example, the initial code “Infrastructure” has sub-codes of “Roads” and “Storage”. Transcripts were read carefully, and sentences, phrases, and larger sections of text that fit into one of the 4 initial codes were highlighted. Each highlighted text was copied into a database under the corresponding initial code, and if it fit, into one of the primary sub-codes.

During the initial- and sub-coding process, information on additional topics emerged. While these pieces of information fit into an initial code, they did not fit into any of the sub-codes. Therefore, they were labeled with new sub-codes. For example, under the initial code “Infrastructure”, we identified additional sub-codes, “women’s ownership of land”, “additional family income streams”, and “post-harvest loss”. During the data analysis process, the coding scheme was further refined to include new sub-codes as they emerged.

Data collected from key informant interviews and focus group discussions was analyzed using a manual coding process, often referred to as “hand” methods. Coding is a process of systematically and somewhat subjectively organizing qualitative data into categories of ideas, concepts, or themes that correspond in some way to the key components of the activity in question. Each category is a code, and each code is labeled with a word or phrase. The coding process is the heart of analyzing qualitative data. It allows the evaluator to create an organized picture of what is happening, it and facilitates the reporting of outcomes to relevant stakeholders.

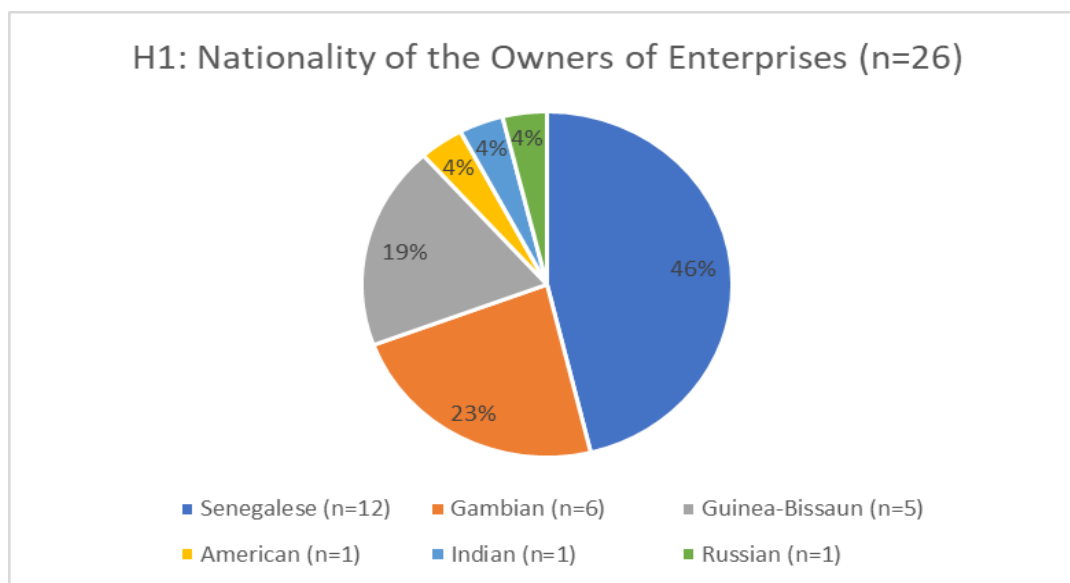
Arete chose as initial codes the four components of the LIFFT-Cashew project: 1) Infrastructure; 2) Finance; 3) Market access and linkages; and 4) On-farm practices. Each of the four components has sub-components which were identified as sub-codes. For example, the initial code “Infrastructure” has sub-codes of “Roads” and “Storage”. Transcripts were read carefully, and sentences, phrases, and larger sections of text that fit into one of the 4 initial codes were highlighted using pen or paper or else in the qualitative software MAXQDA. Each highlighted text was copied into a database under the corresponding initial code, and if it fit, into one of the primary sub-codes.

During the initial- and sub-coding process, information on additional topics emerged. While these pieces of information fit into an initial code, they did not fit into any of the sub-codes. Therefore, they were labeled with new sub-codes. For example, under the initial code “Infrastructure”, we identified additional sub-codes, “women’s ownership of land”, “additional family income streams”, and “post-harvest loss”. During the data analysis process, the coding scheme was further refined.

APPENDIX H: SURVEYED ENTERPRISE CHARACTERISTICS

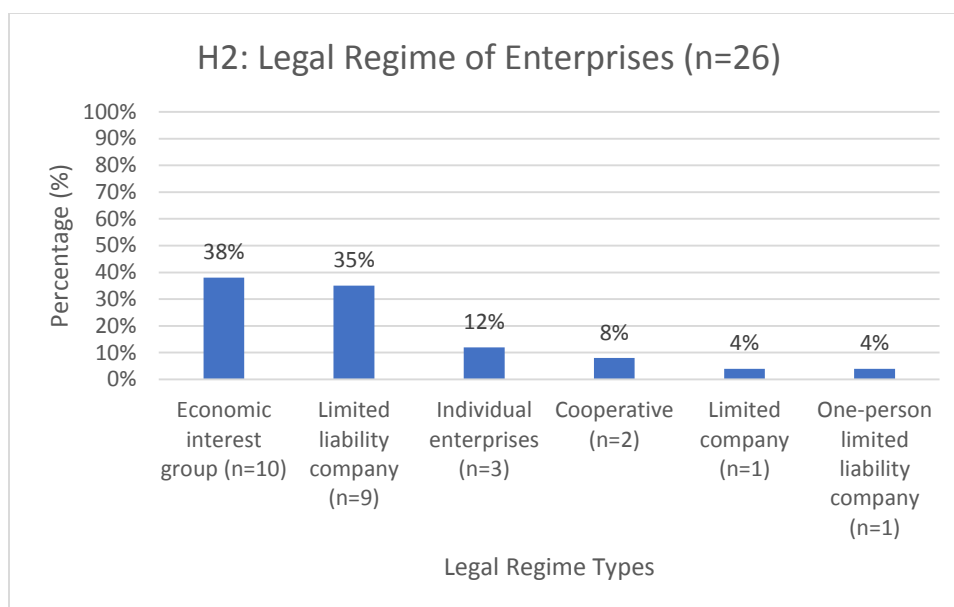
Nationality of owners of enterprises

According to Figure H1, in terms of the nationalities of the owners of the cashew processing enterprises surveyed in the SeGaBi region, 46% are Senegalese, 23 % are Gambian, and 19% are from Guinea-Bissaun. There are a few owners who are from America, India, and Russia, who mainly produce for exportation.



Legal regime of enterprises

The legal form of an enterprise is an important feature of its status. Most enterprises in this survey are an Economic Interest Group (38%) or Limited Liability Companies (35%). Only 12% of them are individual enterprises. The Limited Company and the One Person Limited Liability Company each represent approximately 4% of the total 26 enterprises surveyed (See Figure H2).



Processing for international market

As demonstrated in Table H1, the survey results show that only three processors are exporting RCN, and the average quantity of RCN exported for 2017 is 3333 tons. In 2017, 10 out of the 26 enterprises surveyed had exported cashew kernel, and the average quantity exported was approximately 10 tons. On the other hand, only six enterprises had exported roasted cashew and the average quantity was approximately 0.6 tons. The average total volume of exportation for enterprises is approximately 3733 tons.

Table H1: Volumes of Exports for 2017

Volumes of exportations	Sample Size (n)	Average
RCN (tons)	3	3333
Cashew kernel (tons)	10	10
Roasted cashew (tons)	5	0.6
Enterprises total volume of Exportations (tons)	9	3733

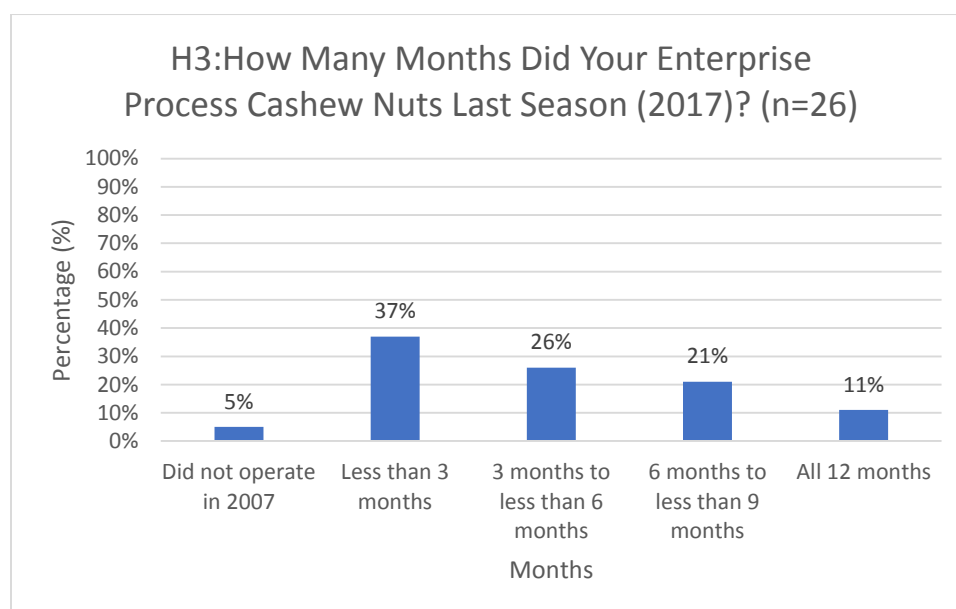
Employment creation in processing enterprises

The survey results show that women represent the majority of seasonal and permanent workers. On average, the enterprises employ 3 permanent male workers and 9 permanent female workers. Seasonal workers are more important. On average, 12 male seasonal workers and 37 female seasonal workers are employed. These results show that women have more employment in employment processing than men in these enterprises(See Table H2).

Table H2: How Many Persons Work in this Enterprise?

Variable	Sample Size (n)	Average
Male permanent workers	26	3
Female permanent workers	26	9
Male seasonal workers	26	12
Female seasonal workers	26	37

The survey analysis of activities of the processing enterprises in 2017 shows that 84% of enterprises surveyed processed cashew nuts 9 months or less last season (See Figure H3).



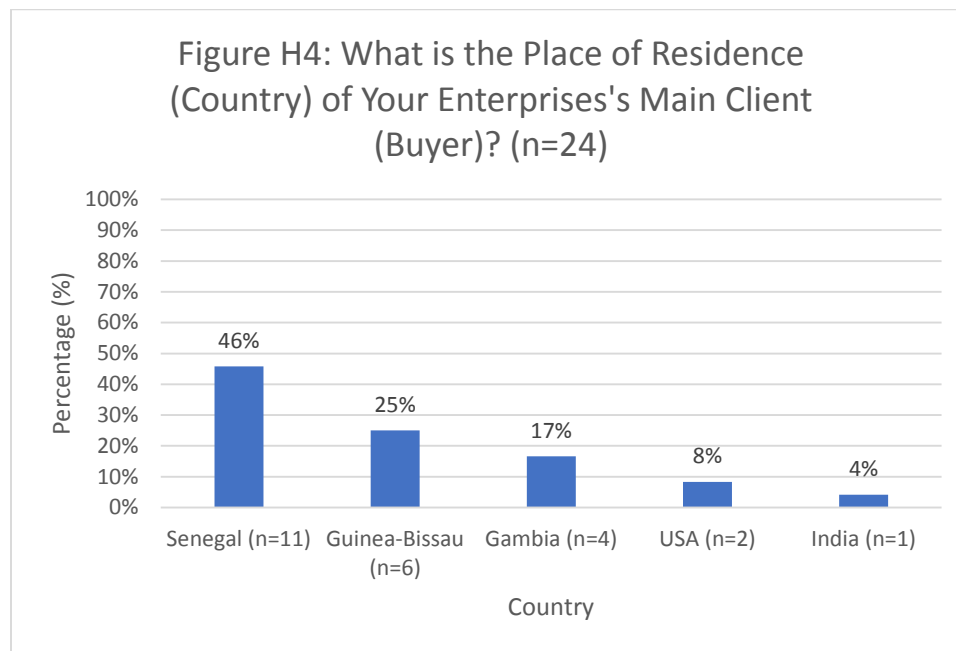
Almost all of the enterprises surveyed use semi-industrial methods to process their cashews. In Senegal, 12 enterprises, 8 enterprises in Gambia, and 6 enterprises in Guinea Bissau use this method.

Residence of main suppliers

Guinea-Bissau, Gambia, and Senegal are the three main locations of residence for the enterprises' main suppliers of RCN, with Senegal having 12 suppliers, Guinea-Bissau having 7 suppliers, and Gambia having 5 suppliers for surveyed enterprises.

Buyer information

According to the respondents, around 88% of enterprises surveyed are selling their products in the SeGaBi region(See Figure H4).



Enterprise trainings

As can be seen in Table H3 below, the majority of respondents (20) participated in a training other than a buyer-seller relationship, and marketing and branding related training program for all three countries. Further, in the past three years, 24 of the respondents applied and/or improved the techniques or technologies related to cashew processing and sales. This information was learnt primarily from development programs (17), as well as from government programs like PADEC (3), and a combination of methods including friends and self-discovery (See Figure H5). Processors learnt new techniques through projects such as IRD and USAID. They learnt how to use different sorts of equipment, how to sort nuts in a category, the required cooking time for products, techniques related to nurseries, drying techniques, storage standards, techniques related to cashew apple, nonalcoholic juice production, techniques for producing higher quality apples, juice conditioning techniques, and production techniques for cashew honey, flour production, and cous-cous.

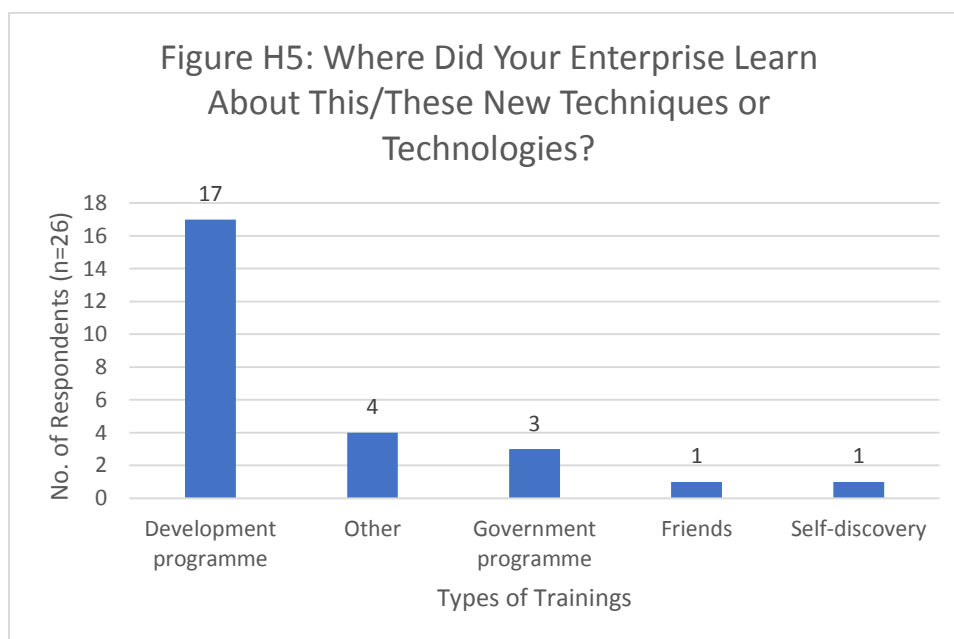
Furthermore, the enterprises we interviewed have received capacity building training in cashew processing techniques particularly on specification of RCN, quality control of RCN (nut count and out turn test training). For instance, in Guinea Bissau, the enterprise owner of Emicore Filhos learned techniques of processing cashew apple into Brazilian juice and cashew apple drying techniques. After these trainings, her enterprise was able to produce better quality of

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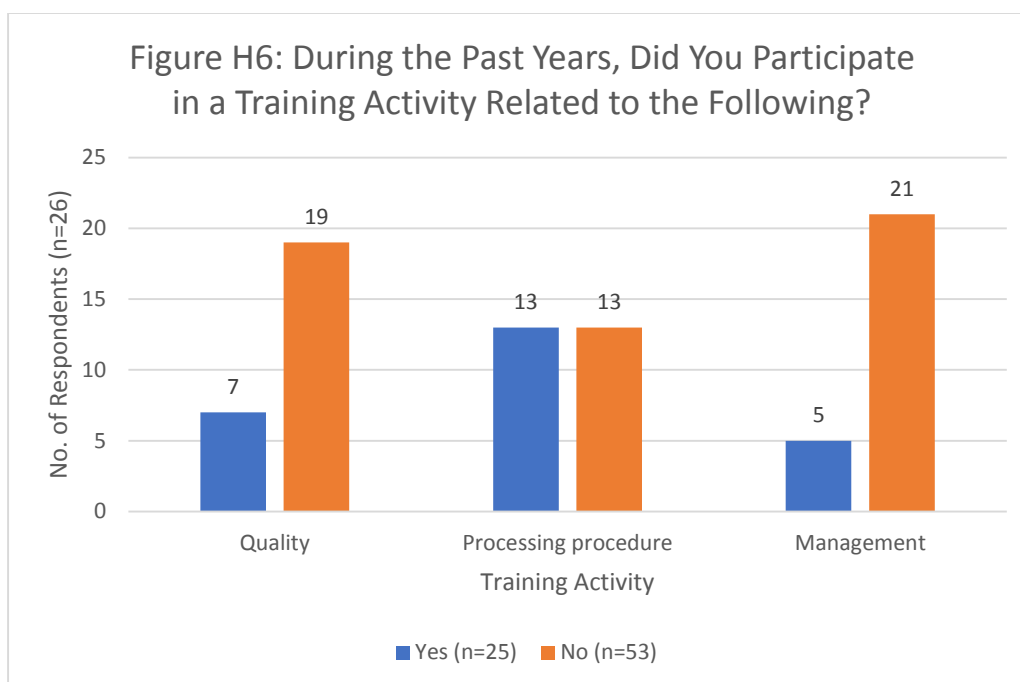
juice, and she has been honored through different producer awards for the quality of her cashew juice. Also, in Gambia, Lamin cashew processing enterprise before trainings used to use barrel to steam the cashew nuts and sunshine to dry the kernel and local plastic bags for packaging. But now, with new technologies, they can operate any types of processing machines; automatic and manual, automatic packaging or vacuum packaging.

Table H3: Training Activity by Country Level

During the Past Years, Did you Participate in a Training Activity Related to the Following?	Respondent Country			Total
	Senegal	Gambia	Guinea Bissau	
Buyer-seller relationship		1		2
Buyer-seller relationship and Marketing & Branding	1	2		2
Marketing & branding		1	1	2
Other	11	4	5	20



The field of training differed as seen in Figure H6. Only seven of the 26 respondents received training on quality, five received management training, and 13 received training on processing procedures. Overall, the results show that not enough training occurs, specifically in management and quality. There were 26 respondents surveyed for each training category.



Enterprise certifications

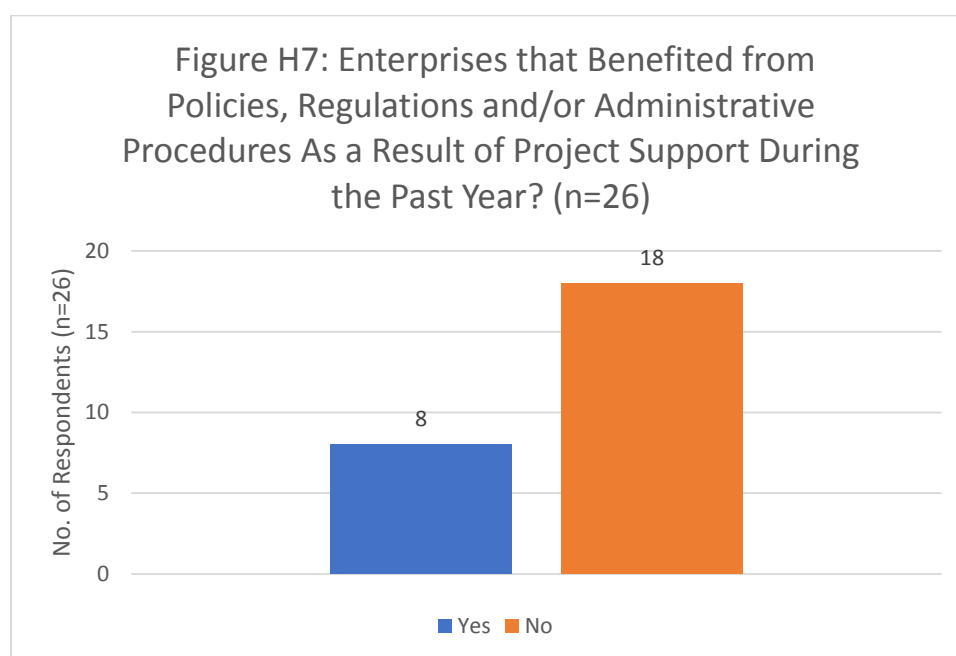
In terms of public-private partnerships and industry certifications for enterprises surveyed, there was only one enterprise surveyed who formed a public-private partnership in the last three years. For example, the enterprise Quade-Quade SARL in Guinea Bissau is receiving subsidize from the government for RCN purchase.

On the other hand, 10 of the respondents stated that they had obtained some form of industry certification. The certifications include United States Department of Agriculture (USDA) organic (one enterprise each in Gambia and Senegal), Hazard Aanalysis Critical Control Point (HAACP) (three enterprises in Gambia), Institut de Technologie Alimentaire (ITA-FRA), Bio Certification (three enterprises in Senegal), and African Cashew Alliance (ACA) Quality and Sustainability Seal (one enterprise each in Gambia and Senegal). There have been positive effects after receiving certifications for the trainings for enterprises. It improves their production that leads to high sales. For instance, according to the enterprise representative of Jawneh & Family Cashew Processing Center in Gambia, “The HACCP Certificate we received has made buyers to trust our products and there is always a ready market for our products, it helps people to give us contracts, supermarkets and hotels buy our products.” Further, through the support of International Trade Center (ITC), Cashew Gam Company was HACCP certified. It took the company two years to implement trainings to be certified and this certification helps the company to sell their products in the international market.

Table H4: Industry Certifications by Country Level

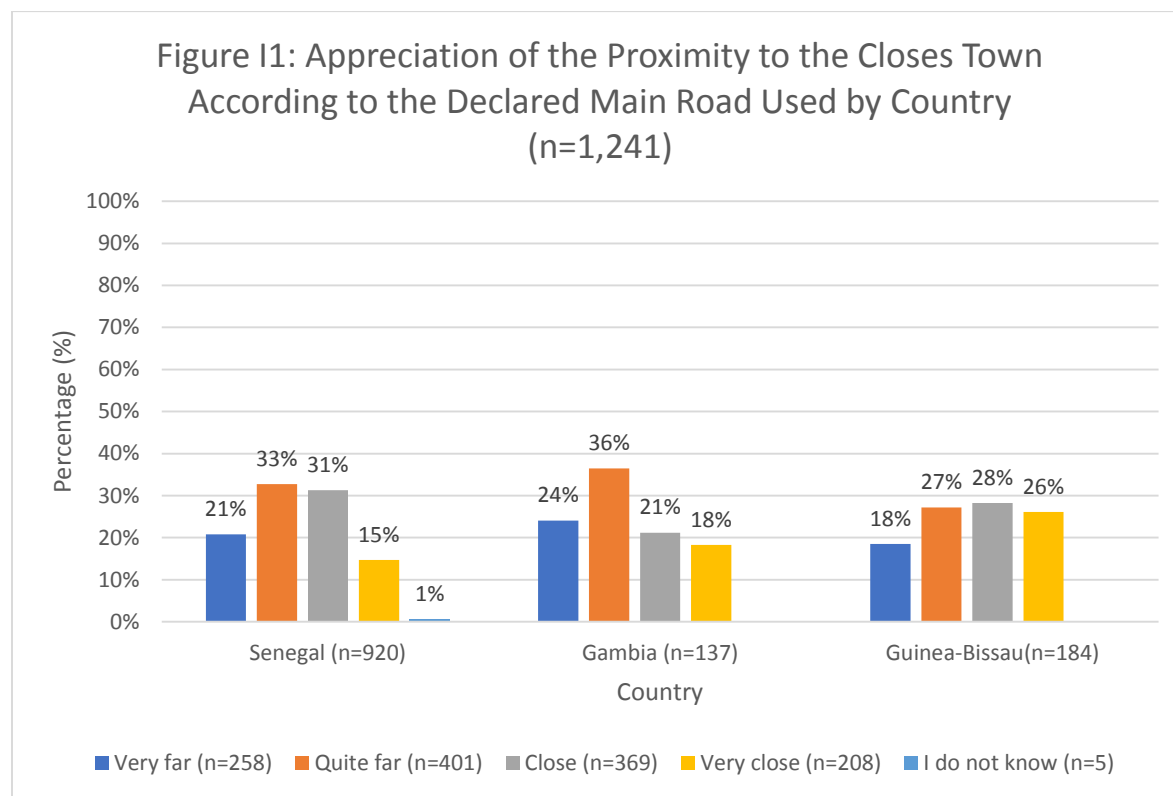
Industry Certifications	Respondent Country			Total
	Senegal	Gambia	Guinea Bissau	
ACA Quality and Sustainability Seal	1	1		2
ITA-FRA, Bio Certification	3			3
HACCP	3			3
USDA	1	1		2

Based on Figure H7, only eight enterprises benefited from policies, regulations, and administrative procedures in 2017. For example, enterprises who did benefit from policies and regulations obtained support in the form of (but not limited to) financial and administration management, maintaining the salary of the staff, receiving support for projects from FUNDEI, a government program in Guinea-Bissau that supports the cashew value chain. During the past years, the project has bought nuts to help the local industry. Entrepreneurs take the nuts at a subsidized price. The goal is to support the raw nut supply of local processor units' and formulating of a cashew policy in Gambia, and subsidies from the government. However, in Gambia and Senegal, there are no political regulations in the cashew sector, thus, the cashew market does not have stable price control through government policies at this point.



APPENDIX I: ADDITIONAL INFORMATION ON INFRASTRUCTURE FEEDER AND CONNECTOR ROADS

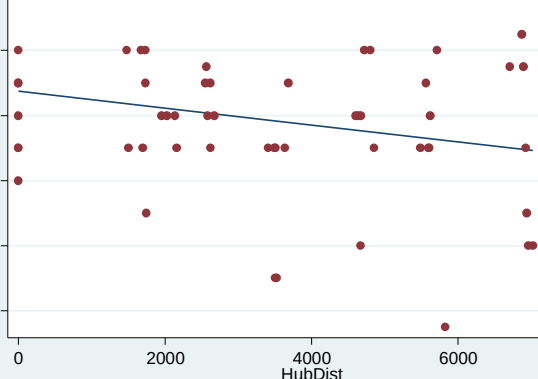
In the Figure I1 below represents the appreciation of the distances between the closes town and the place of residence of the household. For all the three countries, the closes town seems to be quite far or very far from the household's residence. Among others reason, this can be considered as a reason for the household producers selling at the farm or at the village level. In addition, the apparent proximity of the town may hide impracticable roads that are difficult to transport their production, especially for Guinea- Bissau.



The map below (See Figure I2) gives the representation of the roads of Senegal and Gambia according to the Digital Chart of the World (DCW). We used this representation of the roads in the three countries, combined with the GPS coordinate of the surveyed farmers to calculate the distance between their place of residence and the closes principal road. In fact, this approach is more effective than using the main roads declared by the farmers. In fact, the farmers of a same village may have different appreciation of the definition of the “main closes road” and may declare different roads as the closes to their village. Using the map from the DCW helped

standardize the definition of “main closes town” and eliminate the subjectivity behind it. With that procedure, we made the data that was collected on the distance objective and comparable.

The three following Figures below (See Figures I3 to I5) display the relationship between the distance to the nearest road and the average price per kilogram of RCNs for the regions for which the price are significantly influenced by the distances. The Figures shows (See Figures I3 to I5) that in Fatick and Ziguinchor (Senegal) and the Lower River (Gambia), the distance between the place of residency of the household producer and the closes road influences significantly and it negatively affects the average selling price of 1kg of RCN. That means that the more the distance to the main road is important (the farer is the main road), the more the selling price and one 1kg of RCN is low. However, deeper analysis during the mid-term and final evaluation may be necessary to confirm this relationship.



A scatter plot showing the relationship between HubDist (X-axis) and mrcn_price (Y-axis). The X-axis ranges from 0 to 8000, and the Y-axis ranges from 500 to 1000. The plot includes a blue line representing the fitted values and red dots representing the mrcn_price data points. The fitted line shows a negative correlation, starting at approximately 840 for HubDist = 0 and ending at approximately 740 for HubDist = 7000. The data points are scattered around this line, with some outliers at higher HubDist values.

Figure I4: Distance and Price for Ziguinchor, Senegal

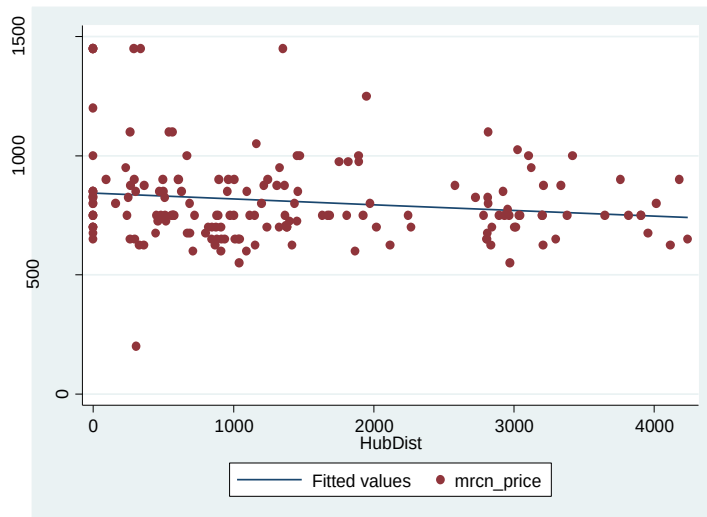
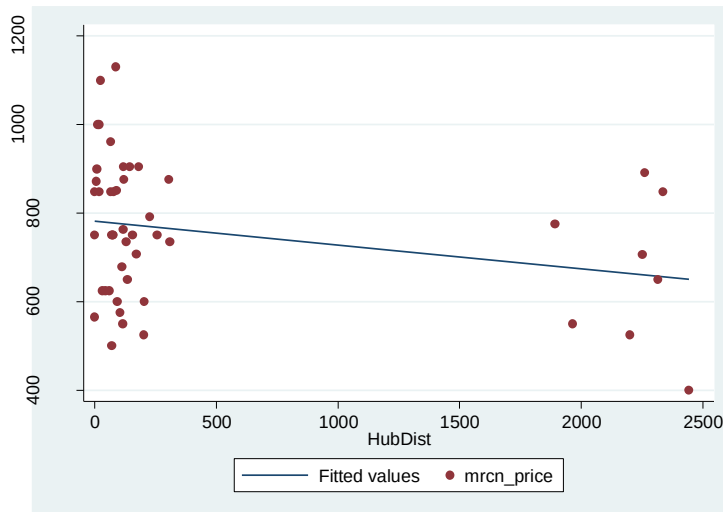


Figure I5: Distance and Price Lower River for Gambia



The Figures I3, I4, and I5 displays the relationship between the distance to the nearest road and the average price per kilogram of RCNs for the regions for which the price are significantly influenced by the distances.

Table I1: Roads Used by Producer Households⁹

Country	Name of Road	Type of Road (Primary, Secondary, Tertiary, Trunk, Track, etc.)
Senegal	Agniak-Boutoupa	Secondary
	Camaracounda-Laty	Secondary
	Djibanar-Bafata	Secondary
	Samine-Marsaye	Secondary
	Djifangor-Boulom	Secondary
	Simbandi Balante-Border	Secondary
	Goudomp-Prefecture/River	Secondary
	Terimbass-Safane	Secondary
	Safane-Border	Secondary
	Labisente-Kanten	Secondary
	Baghagha-Espagne	Secondary
	Tambacoumba-Foot	Secondary
	Foot-Koubone	Secondary
	Sindone-Ndambou	Secondary
	Bakonding-Bindaba	Secondary
	Laty-Niadhio	Unknown
	Goudomp-Bindaba	Secondary
	Djimbana-Safane	Secondary
	Djimbana-Diattacounda	Secondary
	Sathioum-Madina Balante-Sanou	Secondary

⁹ For details on how we defined the different types of roads please see:
https://wiki.openstreetmap.org/wiki/Highway_Tag_Africa and
https://wiki.openstreetmap.org/wiki/East_Africa_Tagging_Guidelines

	Samine(RN6)-Limane-Niacounda-Sina-Kougnara-(Kignine-Bambato)	Secondary
	Mangaroungou Santo-Mangaroungou Douma-Marakissa-Segafoula	Secondary
	Tanaf-Bissassou-Ndiaya-Dafiya (GB)	Secondary
	Djiafar Douma-Diafar Santo-Djibabouya	Secondary
	Tobor-Baghabha-Kassankil-Niamone-Kandiou-Diandalate-Diagobel (D210)	Secondary
Gambia	Kassakd-Gunjur	Tertiary
	Talen-Toro Alassane-Kerr Jariga Jobe	Unclassified
	Jurunku-Keur Chebo-Prince-Keur Alpha-Keur Biran-Ndungu Kebbe	Unclassified
	Karantaba-Mesira	Secondary road
	Fass Ndiaga Choi-Ndofane-Kisse-Kerr waly-Bangale-Yallan-Medina Daarou-Medina Serigne Mass	Track
Guinea-Bissau	K-3 Olossato	Secondary
	Cutia-Darsalam	Secondary

Table I2: Roads Used by Enterprises

REDACTED FROM PUBLIC REPORT
Pages 46-47

REDACTED FROM PUBLIC REPORT
Pages 46-47

APPENDIX J: CASH FOR WORK LABORERS SURVEY

Greetings!

Shelter For Life International (SFL) is implementing The Linking Infrastructure, Finance, and Farms To Cashew Project in Senegal, Gambia, and Guinea-Bissau (SeGaBi). The following survey is conducted by SFL for the LIFFT-Cashew project. This questionnaire is intended for participants of the Cash For Work (CFW) program with SFL. The main purpose of this survey is to understand the impact that the CFW employment opportunity had on your household and how the CFW program can be improved going forward. We are asking for your voluntary participation in this survey. This survey will take around **20 to 30 minutes** to complete.

This survey will cover the following sections:

- A: Location History
- B: CFW Program
- C: Demographic Characteristics

Please complete the following survey honestly and to the best of your ability by giving your responses to the enumerators. There is no direct benefit from this survey and you may stop the interview at any time if you do not feel comfortable with it.

Would you like to take the survey? 1 = Yes 2= No (*end with thanks*)

Would you allow us to take photographs of you and your property for the purposes of the survey and to use for our data collection records and our reports?

1 = Yes (*Take a photo of the respondent; take photos later if you would like*)

2=No (*Do not take a photo, and do not take photos later, but continue with the survey*)

The following questions below relate to your location history.

1) Did you move away from your village during the armed conflict between the Senegalese Army and Mouvement Des Forces Démocratiques de Casamance (MFDC)?

- ☐ Yes
- ☐ No
- ☐ Not Applicable

2) The current village you are residing in, is this your original (born and raised in) village?

- ☐ Yes
- ☐ No

3) How long have you been living at the current location?

- ☐ Less than 6 months
- ☐ 6 months
- ☐ 7 months to 1 year
- ☐ 1 year to 3 years
- ☐ Over 3 years

4) Why did you decide to return back to the village you are currently living in?

- ☐ MFDC has left the region
- ☐ Road rehabilitation has improved access to RN6 and other locations
- ☐ Road rehabilitation has improved safety
- ☐ Opportunity for work
- ☐ Opportunity for SFL Cash-For-Work Program
- ☐ Other (Please specify): _____

The following questions below relate to the Cash For Work (CFW) program conducted by SFL.

5) How did you hear about the CFW program?

- ☐ Village chief
- ☐ Village community members
- ☐ Family members
- ☐ Friends
- ☐ Newspaper
- ☐ Radio
- ☐ Other (Please specify): _____

6) Who selected you for the CFW program?

- ☐ Shelter For Life
- ☐ Village chief
- ☐ Department of labor and employment
- ☐ Other (Please specify): _____

7) What was your tasks as a CFW laborer? Please select all that apply.

- ☐ Conducting bush clearing
- ☐ Conducting drainage digging and structuring
- ☐ Other (Please specify): _____

8) Up to now, how much money have you earned as a CFW laborer? _____ (Local Currency)

9) How have you spent your earnings from the CFW program? Please select all that apply.

- ☐ Food

- ☐ Clothes
- ☐ School fees
- ☐ House repairs
- ☐ Built house
- ☐ Buying house furniture/equipment
- ☐ Medical expenses
- ☐ Wedding expenses
- ☐ Funeral expenses
- ☐ Started a business
- ☐ Purchased motorbike
- ☐ Other (Please specify): _____

10) Please explain briefly what impact your participation in the CFW program has had on your household.

I will now read a series of statements about the CFW program. Please tell me to what extent you Strongly disagree, Disagree, Neither agree nor disagree (Neutral), Agree, or Strongly agree.

1-Strongly Disagree (SD) 2-Disagree (D) 3-Neither Agree Nor Disagree (N) 4-Agree (A) 5-Strongly agree (SA)

	SD	D	N	A	SA
11) The earnings from the CFW program are very important to my livelihood/ability to provide for my family and I.					
12) I have financial/economic security in my household due to my earnings from the CFW program.					
13) The CFW program has provided employment opportunities for my community.					
14) The CFW program has provided employment opportunities for youth.					

15) The CFW program has provided employment opportunities for women.					
16) The CFW program has helped with building harmony and friendship among different ethnic groups.					
17) The feeder roads built by CFW laborers will help to enhance the livelihoods of my community.					
18) The supervisors of the CFW program paid our earnings on time.					
19) The wages paid to me as a CFW laborer were fair based on the tasks I completed.					
20) My supervisor did not rush me through my work, I had sufficient time to complete my work.					
21) The supervisors of the CFW program were respectful to me.					

For the following set of questions, I will ask you about your personal satisfaction with the CFW program. For each question, please indicate whether you were Not at all satisfied, Slightly satisfied, Moderately satisfied, Very satisfied, or Extremely satisfied Not at all satisfied= 1 Slightly satisfied = 2 Moderately satisfied=3 Very satisfied=4 Extremely satisfied= 5					
How satisfied, if at all, were you with...	Not at all satisfied	Slightly satisfied	Moderately satisfied	Very satisfied	Extremely satisfied
22) Selection process of CFW laborers					
23) The general working conditions					

experienced as a CFW laborer					
24) The wages paid					
25) Time reporting process					
26) The medical treatment provided by the nurse					
27) The direct supervisor in charge of me					

Please answer the following questions to the best of your knowledge.

28) Please describe any major challenges you faced as a CFW laborer.

29) Please share any suggestions or recommendations you have to improve the CFW program.

30) Please share any other thoughts that you would like to share about your participation in or the impact of the CFW program.

Demographic Questions

31) What is your surname and name? _____

32) What is your telephone number? _____

33) Which village do you live in? _____

34) What is your current age? _____

35) Which of the following best describes your ethnic background?

- ☐ Wolof
- ☐ Mandingue
- ☐ Peuhl
- ☐ Sérère
- ☐ Fula
- ☐ Serer
- ☐ Diola
- ☐ Bainak
- ☐ Balanta
- ☐ Manajac
- ☐ Mankanya
- ☐ Karoninka
- ☐ Bandial
- ☐ Mandinka
- ☐ Soinke
- ☐ Bassari
- ☐ Bedick
- ☐ Pulaar
- ☐ Bambara
- ☐ Other, (Please Specify: _____)

36) What is your sex?

- ☐ Male
- ☐ Female

37) What is your marital status?

- ☐ Unmarried
- ☐ Polygamous

- ☐ Monogamous
- ☐ Widowed
- ☐ Divorced

38) How many children do you have who are under 18 years old?

39) What is the highest level of education have you completed?

- ☐ No education
- ☐ Literate in Arabic
- ☐ Literate in a local language
- ☐ Any education
- ☐ Primary
- ☐ Secondary
- ☐ University education
- ☐ Any education
- ☐ Other, (Please specify): _____

Thank you for Completing this Survey!

APPENDIX K: HOUSEHOLD CASHEW PRODUCER SURVEY

The final version of the Household cashew producer survey in English and French, the raw data files, and the STATA syntax files can be found [here](#).

APPENDIX L: ENTERPRISE SURVEY

The final version of the Enterprise survey in English and French, the raw data files, and STATA syntax file can be found [here](#).

APPENDIX M: FOCUS GROUP DISCUSSION AND KEY INFORMANT INTERVIEWS

INFORMED CONSENT FORM

CONSENT FORM

Arete Evaluation Collaborative has been contracted to conduct the baseline evaluation on behalf of Shelter For Life (SFL) for The Linking Infrastructure, Finance, and Farms to Cashew (LIFFT-Cashew) project in Senegal, Gambia, and Guinea-Bissau (SeGaBi). LIFFT-Cashew is a six-year program in SeGaBi that will develop and upgrade the cashew value chain linkages necessary to support an integrated regional trade network. The program will address the value chain linkages through four components: (1) market infrastructure; (2) financial services; (3) market access and linkages; and (4) on-farm practices.

Since you are a key stakeholder for this intended program, we are asking for your voluntary participation in this interview. The main purpose of this focus group discussion/key informant interview is to gather general information about context, circumstances, and key stakeholders before the project is formally implemented.

We would like to ask for your permission to interview you. The interview will take approximately **60 minutes**.

- We will ask about your thoughts and personal experiences in regard to market infrastructure, financial services, market access and linkages, and on-farm practices related to the cashew industry.
- We will audiotape the interview and take notes during the interview.
- You can ask questions at any point during the interview.
- You can skip questions you do not want to answer and you can decide at any time if you do not want to continue the interview.
- Participation in this study is voluntary. There are no right or wrong answers to any of the interview questions that we ask; we are simply asking for your thoughts and personal experiences.
- There will be no compensation provided for participating in this interview.
- If you do not want something you have said included in what we share to SFL, please let us know.

I verbally consent to participate in the study.

FOCUS GROUP DISCUSSION AND KEY INFORMANT INTERVIEWS INFORMED CONSENT FORM FRENCH VERSION

FORMULAIRE DE CONSENTEMENT

Arete Evaluation Collaborative a été engagée par Shelter For Life (SFL) pour mener l'évaluation de référence du Projet d'Appui à la Commercialisation de la Filière Anacarde au Sénégal, en Gambie et en Guinée-Bissau (SeGaBi).

Le projet LIFFT-Cajou est une intervention de six ans qui a pour objectif de développer et améliorer les liens de la chaîne de valeur du cajou nécessaires pour soutenir un réseau commercial régional intégré. Le programme abordera les liens de la chaîne de valeur à travers quatre composantes: (1) l'infrastructure de marché; (2) les services financiers; (3) l'accès au marché et les liens; et (4) les pratiques agricoles.

Puisque vous êtes une partie prenante clé pour ce projet, nous vous demandons de participer volontairement à cet entretien. L'objectif principal de cet entretien /cette discussion de groupe est de recueillir des informations générales sur le contexte, les acteurs et l'état des lieux avant le démarrage effectif du projet.

Nous aimerions vous demander la permission de vous interviewer. L'entrevue prendra environ **60 minutes**.

- Nous vous poserons des questions sur vos réflexions et vos expériences personnelles en matière d'infrastructure de marché, de services financiers, d'accès au marché et de liens commerciaux, et de pratiques agricoles liées au secteur de l'anacarde.
- Nous filmerons l'entrevue et prendrons des notes durant l'entrevue.
- Vous pouvez poser des questions à n'importe quel moment de l'entrevue.
- Vous pouvez ignorer des questions auxquelles vous ne voulez pas répondre et vous pouvez décider à tout moment si vous ne souhaitez pas poursuivre l'entretien.
- La participation à cette étude est volontaire. Il n'y a pas de bonnes ou de mauvaises réponses à l'une des questions d'entrevue que nous posons; nous demandons simplement votre opinion réelle et vos expériences personnelles.
- Aucune compensation ne sera accordée pour participer à cette interview.
- Si vous ne voulez pas que quelque chose que vous avez dit soit inclus dans le rapport que nous allons produire, veuillez nous le faire savoir. Je consens verbalement à participer à l'étude.

APPENDIX N: CASH FOR WORK LABORERS FOCUS GROUP DISCUSSION INTERVIEW PROTOCOL

Date: _____

Location: _____

Time: start _____ end _____

Interviewer(s): _____

Translator _____

Notetaking/Observation _____

Interviewees:

Name 1: _____

Contact info: _____

Name 2: _____

Contact info: _____

Name 3: _____

Contact info: _____

Name 4: _____

Contact info: _____

Name 5: _____

Contact info: _____

Name 6: _____

Contact info: _____

Name 7: _____

Contact info: _____

Name 8: _____

Contact info: _____

Name 9: _____

Contact info: _____

Context Notes: _____

Interview Questions

1. What is your experience with Cash For Work (CFW)?
 1. a. What type of work did you do in the last 6 months for CFW?
 1. b. What do you know about the CFW program run by Shelter for Life?
 1. c. How much money did you earn?
2. Would you say more about your experience doing CFW building roads?
 2. a. What, if any, were the major successes of the CFW program for you?
 2. b. What, if any, were the major challenges of the CFW program for you?
 2. c. How were these challenges addressed?
 2. d. What more can you say about your participation in the CFW program for building roads?
3. What did you spend the money on?
 3. a. How did it help you and your family?
4. How do you think the SFL roads will impact your community?
 4. a. Socio-culturally
 4. b. Economically
 4. c. Conflict
 4. d. Environmentally
 4. e. Gender

Probing on the impacts, if any, the project had on developing the power of women in the community.

Probing on the impacts, if any, the project had on relationships between women and men in the community
5. Do you have any additional thoughts or recommendations about the CFW program for building roads?

**CASH FOR WORK LABORERS FOCUS GROUP DISCUSSION INTERVIEW PROTOCOL
FRENCH VERSION**

Date: _____

Localisation : _____

Heure: _____ **début :** _____ **fin :** _____

Intervieweur (s): _____ **Traducteur :** _____ **Prise de notes / Observation** _____

Participant (e) s au FG:

1. Nom & prénom : _____

Adresse : _____

Téléphone / E-mail :: _____

2. Nom & prénom : _____

Adresse : _____

Téléphone / E-mail :: _____

3. Nom & prénom : _____

Adresse : _____

Téléphone / E-mail :: _____

4. Nom & prénom : _____

Adresse : _____

Téléphone / E-mail :: _____

5. Nom & prénom : _____

Adresse : _____

Téléphone / E-mail :: _____

6. Nom & prénom : _____

Adresse : _____

Téléphone / E-mail :: _____

7. Nom & prénom : _____

Adresse : _____

Téléphone / E-mail :: _____

8. Nom & prénom : _____

Adresse : _____

Téléphone / E-mail :: _____

9. Nom & prénom : _____

Adresse : _____

Téléphone / E-mail :: _____

Notes d'observation sur le contexte : _____

Notes d'observation sur le/les dynamique (s) des groupes / -----

Questions/Guide d'entretien

1. Quelle est votre **expérience avec le Travail contre de l'Argent en général** (Cash for Work)?

- a. Quel type de tâches avez-vous fait au cours des 6 derniers mois en tant que manœuvre communautaire contre de l'argent?
- b. Combien d'argent avez-vous gagné?
- c. Sur quoi avez-vous dépensé l'argent?
- d. Et comment cela vous a-t-il aidé, vous et votre famille?
- e. En particulier avez-vous entendu parler du programme Travail contre Argent (Cash-for-Work) de Shelter for Life? Et qu'en savez-vous ?

2. Que pourriez-vous partager et nous dire au sujet de votre **expérience de manœuvre contre rémunération pour la construction de routes**?

- a. Quels ont été, le cas échéant, les principaux succès du programme Cash for Work pour vous?
 - b. Quels ont été, le cas échéant, les principaux défis du programme Cash for Work pour vous?
 - c. Comment ces défis ont-ils été traités?
 - d. Que pouvez-vous dire de plus sur votre participation au programme «manœuvre contre argent» pour la construction de routes?
3. Comment pensez-vous que le programme «manœuvre contre argent» pour la réalisation de routes aura un **impact sur votre communauté**?
- a. Socioculturellement
 - b. Économiquement
 - c. Du point de vue du conflit, de la paix et de la sécurité
 - d. D'un point de vue de l'Environnement
 - e. Du point de vue du genre : notamment les relations entre les femmes et les hommes dans la communauté, l'autonomisation des femmes dans la communauté etc.
- N.B. les relances devront systématiquement porter sur les possibles effets **positifs** comme **négatifs** de l'intervention.
4. Avez-vous d'**autres idées ou recommandations** concernant le programme «manœuvre contre argent » pour la construction de routes?

APPENDIX O: CASHEW FARMERS FOCUS GROUP DISCUSSION INTERVIEW PROTOCOL

Date: _____

Location: _____

Time: start _____ end _____

Interviewer(s): _____ Translator _____ Notetaking/Observation _____

Interviewees:

Name 1: _____

Contact info: _____

Name 2: _____

Contact info: _____

Name 3: _____

Contact info: _____

Name 4: _____

Contact info: _____

Name 5: _____

Contact info: _____

Name 6: _____

Contact info: _____

Name 7: _____

Contact info: _____

Name 8: _____

Contact info: _____

Name 9: _____

Contact info: _____

Context Notes: _____

Groups Dynamics/observation_____

Interview Questions

1. Please describe briefly your cashew farm. How many hectares do you have? Do you own your land?
2. How much raw cashew nut (RCN) did you produce last year (kilograms, tons, or number of sacks)? What was the price that you received for your cashew last year? Who did you sell to?
3. Have you been exposed to the LIFFT program and how did you hear about LIFFT program?
How do you think the LIFFT program will impact the cashew market in Casamance? In SeGaBi region?
 Probing on process (participation /consultation /....)
 Probing on knowledge of the program (components, services offered, etc.)
4. In terms of market infrastructure (roads, storage, etc.), what is your experience? What challenges are you seeing and how are those challenges addressed? What role, if any, could the LIFFT program play?
 How would rehabilitation of roads impact the cashew market? What kind of improvements are needed?
 How would improvements in post-harvest handling and storage impact the cashew market?
5. In terms of access to financial services for you and other actors in the value chain, what is your experience? What challenges are you seeing and how are those challenges addressed? What role, if any, could the LIFFT program play ?
 What kinds of financial services are needed to help cashew farmers?
6. In terms of market access and linkages for you and other actors in the value chain? What is your experience? What challenges are you seeing and how are those challenges addressed? What role, if any, could the LIFFT program play?
 Are there effective marketing associations? How could they be improved?
 What kind of buyer-seller relations would enhance the cashew market? How could they be strengthened?
7. In terms of good agricultural practices on the cashew farm, what is your experience? What challenges are you seeing and how are those challenges addressed? What role, if any, could the LIFFT program play?
 What kind of on-farm practices would be most useful to farmers and others along the cashew value chain? (clearing of plantation, grafting, pruning, de-topping, fire-beltting)
 What are some challenges to developing various on-farm practices?

8. To what results/changes, if any, will the LIFFT program contribute?
 - Probing on social impact including peace and security
 - Probing on economic impact including for women and youth
 - Probing on change in gender relationships
 - Probing on environmental impact
9. Do you have any other thoughts/recommendations that you would like to share about the LIFFT program? If so, what?

**CASHEW FARMERS FOCUS GROUP DISCUSSION INTERVIEW PROTOCOL FRENCH
VERSION**

Date: _____

Localisation : _____

Heure: _____ **début :** _____ **fin :** _____

Intervieweur (s): _____ **Traducteur :** _____ **Prise de notes / Observation** _____

Participant (e) s au FG:

1. Nom & prénom : _____

Adresse : _____

Téléphone / E-mail : _____

2. Nom & prénom : _____

Adresse : _____

Téléphone / E-mail : _____

3. Nom & prénom : _____

Adresse : _____

Téléphone / E-mail : _____

4. Nom & prénom : _____

Adresse : _____

Téléphone / E-mail : _____

5. Nom & prénom : _____

Adresse : _____

Téléphone / E-mail : _____

6. Nom & prénom : _____

Adresse : _____

Téléphone / E-mail : _____

7. Nom & prénom : _____

Adresse : _____

Téléphone / E-mail : _____

8. Nom & prénom : _____

Adresse : _____

Téléphone / E-mail : _____

9. Nom & prénom : _____

Adresse : _____

Téléphone / E-mail : _____

Notes d'observation sur le contexte : _____

Notes d'observation sur le/les dynamique (s) des groupes / -----

Guide d'entretien

1. Veuillez **décrire brièvement votre ferme de noix de cajou.**

Relance Combien d'hectares avez-vous? Etes-vous propriétaire?

Qui travaille dans la ferme et à quels moments

Production de noix de cajou brutes de l'année dernière (kilogrammes, tonnes ou nombre de sacs, process de recolte, etc.)?

Comment s'est passée la commercialisation (prix, marchés et autres)?

2. Avez-vous été en **contact avec le programme LIFFT** et si oui comment avez-vous entendu parler du programme LIFFT?

Relance Comment pensez-vous que le programme LIFFT aura un impact sur le marché de la noix de cajou en Casamance? Dans la région de SeGaBi? Sondage sur le processus (participation / consultation /) Sondage sur la connaissance du programme (composants, services offerts, etc.)

3. En termes d'**infrastructures de marché** (routes, stockage, etc.), qu'en est-il de votre expérience de la réalité actuelle?

Relance: Quels défis voyez-vous et comment ces défis sont-ils traités? Quel genre d'améliorations sont nécessaires? Comment la réhabilitation des routes affecterait-elle le marché de la noix de cajou? Comment les améliorations de la manutention et du stockage post-récolte auraient-elles un impact sur le marché de la noix de cajou? Quel rôle, le cas échéant, pourrait jouer le programme LIFFT?

4. En termes d'**accès aux services financiers** pour vous et les autres acteurs de la chaîne de valeur, qu'en est-il de votre expérience de la réalité actuelle?

Relance Quels défis voyez-vous et comment ces défis sont-ils traités? Quels types de services financiers sont nécessaires pour aider les producteurs de noix de cajou? Quel rôle, le cas échéant, pourrait jouer le programme LIFFT?

5. En termes d'**accès au marché et de liens de marché** pour vous et les autres acteurs de la chaîne de valeur? qu'en est-il de votre expérience de la réalité actuelle?

Relance : Quels défis voyez-vous et comment ces défis sont-ils traités? Quel type de relation acheteur-vendeur améliorerait le marché de la noix de cajou? Comment renforcer cette relation ? Y a-t-il des associations de marketing efficaces? Comment pourraient-ils être améliorés? Quel rôle, le cas échéant, pourrait jouer le programme LIFFT?

6. En termes de (bonnes) **pratiques agricoles et de gestion de vos fermes** de noix de cajou, que pouvez vous en dire?

Relance: Quels défis voyez-vous et comment ces défis sont-ils traités? Quel type de pratiques à la ferme serait le plus utile aux agriculteurs et aux autres acteurs de la chaîne de valeur de la noix de cajou? (débourssailage, greffage, élagage, décapage, coupe-feu) Quels sont les défis liés à l'élaboration de diverses pratiques à la ferme? Quel rôle, le cas échéant, pourrait jouer le programme LIFFT?

7. À quels **résultats / changements**, s'il y a n'a, le programme LIFFT contribuera-t-il?

Sondage/relance sur l'impact social, y compris la paix et la sécurité

Sondage/relance sur l'impact économique, y compris pour les femmes et les jeunes

Explorer le changement dans les relations de genre, l'autonomisation/le pouvoir des femmes dans les ménages et dans la communauté etc

Sondage sur l'impact environnemental

N.B. les relances devront systématiquement porter sur les possibles effets **positifs** comme **négatifs** de l'intervention.

8. Avez-vous d'autres **questions ou commentaires** que vous voulez apporter au programme LIFFT? Si oui que sont-ils?

APPENDIX P: CASHEW RELATED ENTERPRISES FOCUS GROUP DISCUSSION PROTOCOL

Date: _____

Location: _____

Time: start: _____ end: _____

Interviewer(s): _____ **Translator** _____ **Notetaking/Observation** _____

Interviewees:

Name 1: _____

Contact info: _____

Name 2: _____

Contact info: _____

Name 3: _____

Contact info: _____

Name 4: _____

Contact info: _____

Name 5: _____

Contact info: _____

Name 6: _____

Contact info: _____

Name 7: _____

Contact info: _____

Name 8: _____

Contact info: _____

Name 9: _____

Contact info: _____

Context Notes: _____

Groups Dynamics/observation notes

Interview Questions

1. Please describe briefly the cashew-related enterprise that you are in? What are successes? What are challenges?
 Probing on common challenges and successes
 Probing on challenges and successes which are specific (considering gender, size, typology of enterprise, etc.)
2. Have you been exposed to the LIFFT program and how did you hear about LIFFT program?
 Probing on process (participation /consultation /...)
 Probing on knowledge of the program (components, services offered, etc.)
3. In terms of access to markets infrastructures (roads, storages, etc.), ? What is in your experience of current reality? What challenges are you seeing and how are those challenges addressed? What role, if any, could the LIFFT program play?
4. In terms of access to finances services for you and other actors in the value chain? What is in your experience of current reality? What challenges are you seeing and how are those challenges addressed? What role, if any, could the LIFFT program play?
5. In terms of market access and linkages for you and other actors in the value chain? What is in your experience of current reality? What challenges are you seeing and how are those challenges addressed? What role, if any, could the LIFFT program play?
6. In terms of on farm practice of cashew farmers, and technical capacity of other actors in the value chain, what is your experience of current reality? What challenges are you seeing and how are those challenges addressed? What role, if any, could the LIFFT program play?
7. To What results/changes, if any, do you think will the LIFFT program be contributing to?
 Probing on social impact including peace and security
 Probing on economic impact including for women and youth
 Probing on change in gender relationships
 Probing on environmental impact
8. Do you have any other thoughts/recommendations that you would like to share about the LIFFT program? If so, what?

**CASHEW RELATED ENTERPRISES FOCUS GROUP DISCUSSION PROTOCOL FRENCH
VERSION**

Date: _____

Localisation : _____

Heure: **début :** _____ **fin :** _____

Intervieweur (s): _____ **Traducteur :** _____ **Prise de notes / Observation** _____

Participant (e) s au FG:

1. Nom & prénom: _____

Adresse: _____

Téléphone / E-mail: _____

2. Nom & prénom: _____

Adresse: _____

Téléphone / E-mail: _____

3. Nom & prénom: _____

Adresse: _____

Téléphone / E-mail: _____

4. Nom & prénom: _____

Adresse: _____

Téléphone / E-mail: _____

5. Nom & prénom: _____

Adresse: _____

Téléphone / E-mail: _____

6. Nom & prénom: _____

Adresse: _____

Téléphone / E-mail: _____

7. Nom & prénom: _____

Adresse: _____

Téléphone / E-mail: _____

8. Nom & prénom: _____

Adresse: _____

Téléphone / E-mail: _____

9. Nom & prénom: _____

Adresse: _____

Téléphone / E-mail: _____

Notes d'observation sur le contexte: _____

Notes d'observation sur le/les dynamique (s) des groupes / -----

Guide d'entretien

1. Veuillez **décrire brièvement l'entreprise liée à la noix de cajou** dans laquelle vous êtes?

Quels sont les succès? Quels sont les défis?

Sonder /Relancer sur les défis communs et les réussites

Sonder/Relancer sur les défis et les succès spécifiques (en tenant compte du genre, de la taille, de la typologie de l'entreprise, etc.)

2. Avez-vous été en **contact avec le programme LIFFT** et si oui comment avez-vous entendu parler du programme LIFFT?

Sondage/Relance sur le processus (participation / consultation /)

Sondage/Relance sur la connaissance du programme (composants, services offerts, etc.)

3. En termes d'**accès aux infrastructures de marché** (routes, stockages, etc.), qu'en est-il de votre expérience de la réalité actuelle?

Relance : Quels défis voyez-vous et comment ces défis sont-ils traités? Quel rôle, le cas échéant, pourrait jouer le programme LIFFT?

4. En termes d'accès aux **services financiers** pour vous et les autres acteurs de la chaîne de valeur? Qu'en est-il de votre expérience de la réalité actuelle?

Relance : Quels défis voyez-vous et comment ces défis sont-ils traités? Quel rôle, le cas échéant, pourrait jouer le programme LIFFT?

5. En termes d'**accès au marché et de liens de marchés** pour vous et les autres acteurs de la chaîne de valeur?

Relance : Qu'en est-il de votre expérience de la réalité actuelle? Quels défis voyez-vous et comment ces défis sont-ils traités? Quel rôle, le cas échéant, pourrait jouer le programme LIFFT?

6. En ce qui concerne la **pratique agricole et de gestion des producteurs** de noix de cajou et la **capacité technique des autres acteurs** de la chaîne de valeur, quelle est votre expérience de la réalité actuelle?

Relance Quels défis voyez-vous et comment ces défis sont-ils traités? Quel rôle, le cas échéant, pourrait jouer le programme LIFFT?

7. À quels **résultats / changements**, le cas échéant, pensez-vous que le programme LIFFT contribuera?

Sondage/relance sur l'impact social, y compris la paix et la sécurité

Sondage/relance sur l'impact économique, y compris pour les femmes et les jeunes

Explorer le changement dans les relations de genre, l'autonomisation/le pouvoir des femmes dans les ménages et dans la communauté etc

Sondage sur l'impact environnemental

N.B. les relances devront systématiquement porter sur les possibles effets **positifs** comme **négatifs** de l'intervention.

8. Avez-vous d'autres **idées / recommandations** que vous aimeriez partager à propos du programme LIFFT? Si oui, quoi?

APPENDIX Q: CASHEW KERNEL PROCESSORS KEY INFORMANT INTERVIEW PROTOCOL

Date: _____

Time: start _____ end _____

Interviewee Name: _____

Title: _____

Organization: _____

Telephone: _____

Email: _____

Interviewer(s): _____

Translator: _____ **Notetaker** _____

Location: _____

Context / Observation Notes (about interviewee, working environment etc.)

Interview Questions

Questions about the interviewee's livelihood –

1. Please describe briefly the cashew kernel processing business that you are in?

Probing: What is your role (owner, partner etc.)? How long have you been in this enterprise?

Probing: How has your business developed in light of the conflict? What kinds of challenges, if any, have there been for your enterprise because of the conflict?

Questions about the interviewee's general thoughts about the LIFFT-Cashew program –

2. What has been your exposure with the LIFFT program so far?

Probing on process (participation /consultation /....) and knowledge of the program (components, services offered, etc....)

Probing: What are your general thoughts about the LIFFT-Cashew program? What is your opinion about the program?

Probing: How do you think the LIFFT-Cashew program will impact the cashew market in your region (short-term / long-term)? In the SeGaBi region?

Probing: What, if any, are the major challenges to the LIFFT-Cashew program? How might these challenges be addressed at the beginning of the program?

Probing: Do you think the LIFFT-Cashew program will directly impact your processing business? If so, how?

Questions about the four components of the LIFFT-Cashew program

Market infrastructure –

3. What is your current experience with market infrastructure (roads, markets, storage facilities)?

Probing: What infrastructure improvements would be most helpful to your processing business?

Probing: What do you think is needed to improve market infrastructure in general for the cashew market in your area/country? In the SeGaBi region?

Probing: One aspect of the market infrastructure component is the rehabilitation of roads from the cashew farms to the towns where processors are located. What kinds of improvements are needed? How do you think the rehabilitation of roads will impact the cashew market?

Probing: Another aspect of the market infrastructure component is the post-harvest handling and storage. What kinds of improvements are needed? How do you think improving post-harvest handling and storage will impact the cashew market?

Financial services –

4. What is your current access to financial services?

Probing: What financial services would you consider as the most helpful to your processing business?

Probing: With regards to LIFFT, one aspect of the financial services component is to facilitate and encourage lending by local and regional financial institutions to cashew farmers and businesses. What kind of financial services do you think are needed to help traders and exporters? What are some constraints in financing the value chain?

Probing: Another aspect of the financial services component is to establish a Cashew Fund to provide a mechanism for investment in small and medium cashew businesses. How should a Cashew Fund be structured for investment in cashew businesses?

Market access and linkages –

5. Currently what kind of relationships do you have within the value chain?

Probing: What kind of relationships would be helpful to your enterprise?

Probing: One aspect of the market access and linkages component is to build cashew marketing associations. How effective, if at all, are current marketing associations in your area/country? In the SeGaBi region? How could they be improved?

Probing: How would cashew-marketing associations impact the cashew market in your country? In the SeGaBi region?

Probing: Another aspect is the capacity building of local trade associations. How effective, if at all, are current local trade associations in your area/country? In the SeGaBi region? How could they be improved?

Probing: One aspect of the market access and linkages component is to develop and strengthen buyer-seller relationships. What kind of buyer-seller relationships would enhance the cashew market? How?

On-farm practices –

6. What is your opinion / perception / experience with farm management practices and on-farm agricultural practices?

Probing: What farm management practices would help the cashew value chain? What are some challenges to developing these practices?

Probing: The LIFFT-Cashew project will encourage good agricultural practices through demonstration farms, training, in-kind grants, and development of cashew nurseries, What kind of on-farm practices would be most useful to farmers and others along the cashew value chain?

Questions about the impact of the LIFFT-Cashew program on stakeholder relationships

7. What effects, if any, may the project have on the livelihood of value chain actors (CFW especially women, cashew processors, traders and exporters, etc.)

Probing: What effects/impacts, if any, will/may the project have on the environment of the value chain (environmental impact, sociocultural impact including gender, economic impact, peace and security)

Probing: In your opinion, and at the beginning of the program, what is needed to create and sustain positive program results?

8. Do you have any additional comments about the LIFFT-Cashew program?

**CASHEW KERNEL PROCESSORS KEY INFORMANT INTERVIEW PROTOCOL FRENCH
VERSION**

Date: _____

Heure: Début _____ Fin _____

Nom de l'interviewé-e : _____

Titre: _____

Organisation: _____

Téléphone: _____

Email: _____

Intervieweur(s): _____ **Traducteur:** _____ **rapporteur** _____

Localisation: _____

Contexte / Notes d'observation (à propos de l'interviewé, de l'environnement de travail, etc.)

Questions sur les moyens de subsistance du répondant

1. Veuillez décrire brièvement le processus de transformation de l'anacarde qui vous concerne ?
 - Relance: Quel est votre rôle (propriétaire, partenaire, etc.)? Depuis combien de temps travaillez-vous dans cette entreprise?
 - Relance: Comment votre entreprise s'est développée face à la crise? A quels défis, le cas échéant, avez vous été confronté du fait de la crise?

Questions sur l'appréciation générale du répondant sur le programme LIFFT-Cajou -

2. Quelle a été votre implication au programme LIFFT jusqu'à présent?
 - Relance : sur le processus (participation / consultation / etc.) Et maîtrise du programme (composantes, services offerts, etc .)
 - Relance: Quelles sont vos impressions générales sur le programme LIFFT-Cajou? Quelle est votre opinion sur le programme?

- Relance: Pensez-vous que le programme LIFFT-Cajou aura un impact sur le secteur de l'anacarde dans votre région (à court / long terme)? Et dans la région de SeGaBi?
- Relance: au cas échéant quels sont, les principaux défis du programme LIFFT-Cajou? Comment ces défis pourraient-ils être pris en compte en début du programme?
- Relance: Pensez-vous que le programme LIFFT aura un impact direct sur votre entreprise? Si c'est le cas, comment?

Questions portants sur les quatre composantes du programme LIFFT-Cajou

Infrastructure de marché:

3. Quelle est votre expérience actuelle avec l'infrastructure du marché de l'anacarde (routes, marchés, magasins de stockage, etc.)?

- Relance: Quelles améliorations de l'infrastructure seraient les plus utiles à votre entreprise?
- Relance: Que pensez-vous serait en général nécessaire pour l'amélioration de l'infrastructure de marché pour le secteur de l'anacarde dans votre région / pays? Dans la SeGaBi?
- Relance: Un aspect de la composante infrastructure de marché est la réhabilitation des routes depuis les fermes d'anacarde jusqu'aux villes où sont les transformateurs. Quels genres d'améliorations seraient nécessaires? Pensez-vous que la réhabilitation des routes aura un impact sur le marché de l'anacarde?
- Relance: l'autre aspect de la composante infrastructure de marché est la manutention et le stockage après récolte. Quels sont types d'améliorations nécessaires? Comment l'amélioration de la manutention et du stockage post-récolte aura un impact sur le marché de l'anacarde?

Services financiers

4. De quels services financiers disposez vous actuellement?

- Relance: Quels services financiers pensez-vous les plus bénéfiques pour le fonctionnement de votre entreprise?
- Relance: Concernant LIFFT, un aspect de la composante services financiers est de faciliter et encourager les prêts contractés par les institutions financières locales et régionales aux producteurs et aux entreprises du secteur de l'anacarde. Quel genre de services financiers pensez-vous nécessaire pour aider les transformateurs et entreprises du secteur? Quels sont les quelques contraintes du financement notées dans la chaîne de valeur.

- Relance: Un autre aspect de la composante des services financiers consiste à créer un fonds de garantie pour le secteur de l'anacarde afin de fournir un mécanisme d'investissement dans les petites et moyennes entreprises du secteur.
- Comment un tel fonds devrait-il être structuré pour l'investissement dans la filière anacarde?

Accès aux marchés et liens d'affaires–

5. Quel genre de relation d'affaire avez-vous actuellement dans la chaîne de valeur anacarde

- Relance: Quel genre de relation serait utile à votre entreprise de transformation?
- Relance: Un objectif de la composante « accès au marché et liens d'affaires » est la création d'associations de commercialisation de cajou. Les associations actuelles de commercialisation dans votre région / pays sont-elles efficaces? Dans la région de SeGaBi? Comment pourraient-elles être améliorées?
- Relance: Comment les associations de marketing d'anacarde auraient-elles un impact sur le marché de la noix de cajou dans votre pays? Dans la région de SeGaBi?
- Relance: Un autre aspect est le renforcement des capacités des associations commerciales locales. Quelle efficacité, dit tout, sont les associations commerciales locales actuelles de votre région / pays sont-elles efficaces? Dans la région de SeGaBi? Comment pourraient-ils être améliorés?
- Relance: Un autre aspect de la composante accès aux marchés et liens d'affaires est de développer et de renforcer les relations acheteur-vendeur. Quel genre de relation acheteur-vendeur améliorerait le marché de la noix de cajou? Comment?

Pratiques agricoles -

6. Quelle est votre opinion / perception / expérience sur les techniques agricoles et de gestion des producteurs ?

- Relance: Quelles pratiques de gestion de la plantation aideraient la chaîne de valeur du cajou? Quels sont les défis pour développer ces pratiques?
- Relance: Le projet LIFFT-Cajou encouragera les bonnes pratiques agricoles à travers des fermes témoins, des formations, des subventions en nature et le développement de pépinières d'anacarde,
- Quel genre de pratiques agricoles serait le plus utile aux agriculteurs et aux autres acteurs de la chaîne de valeur de la noix de cajou?

Impact du programme LIFFT-Cajou sur les parties prenantes

7. Quels effets, au cas échéant, le projet peut-il avoir sur les moyens de subsistance des acteurs de la chaîne de valeur (travailleurs communautaires (CFW) en particulier les femmes, les transformateurs de noix de cajou, les commerçants et les exportateurs, etc.)?

- Relance: Quels effets / impacts, s'il y en a, le projet aurait-il / pourrait-il avoir sur l'environnement de la chaîne de valeur (impact environnemental, impact socioculturel incluant le genre, impact économique, paix et sécurité)
- Relance: À votre avis, dès le début du programme, qu'est-ce qui est nécessaire pour créer et maintenir des résultats positifs?

8. Avez-vous d'autres commentaires supplémentaires sur le programme LIFFT-Cajou?

APPENDIX R: CASHEW RELATED ENTERPRISES KEY INFORMANT INTERVIEW PROTOCOL

Date: _____

Time: start _____ end _____

Interviewee Name: _____

Title: _____

Organization: _____

Telephone: _____

Email: _____

Interviewer(s): _____

Translator: _____ **Notetaker** _____

Location: _____

Context / Observation Notes (about interviewee, working environment etc.) _____

Interview Questions

Questions about the interviewee's livelihood –

1. Please describe briefly the cashew enterprise that you are in?

Probing: What is your role (owner, partner etc.)? How long have you been in this enterprise?

Probing: How has your business developed in light of the conflict? What kinds of challenges, if any, have there been for your enterprise because of the conflict?

Questions about the interviewee's general thoughts about the LIFFT-Cashew program –

2. What has been your exposure to the LIFFT program so far?

Probing on process (participation /consultation /....) and knowledge of the program (components, services offered, etc....)

Probing: What are your general thoughts about the LIFFT-Cashew program? What is your opinion about the program?

Probing: How do you think the LIFFT-Cashew program will impact the cashew market in your region (short-term / long-term)? In the SeGaBi region?

Probing: What, if any, are the major challenges to the LIFFT-Cashew program? How might these challenges be addressed at the beginning of the program?

Probing: Do you think the LIFFT-Cashew program will directly impact your enterprise/your business? If so, how?

Questions about the four components of the LIFFT-Cashew program

Market infrastructure –

3. What is your current access to the cashew market infrastructure (roads, markets, storage facilities) ?

Probing: What infrastructure improvements would be most helpful to your enterprise?

Probing: What do you think is needed to improve market infrastructure in general for the cashew market in your area/country? In the SeGaBi region?

Probing: One aspect of the market infrastructure component is the rehabilitation of roads from the cashew farms to the towns where processors are located. What kinds of improvements are needed? How do you think the rehabilitation of roads will impact the cashew market?

Probing: Another aspect of the market infrastructure component is the post-harvest handling and storage. What kinds of improvements are needed? How do you think improving post-harvest handling and storage will impact the cashew market?

Financial services –

4. What is your current access to financial services?

Probing: What financial services would you consider as the most helpful to your enterprise?

Probing: With regards to LIFFT, one aspect of the financial services component is to facilitate and encourage lending by local and regional financial institutions to cashew farmers and businesses. What kind of financial services do you think are needed to help cashew enterprises? What are some constraints in financing the value chain?

Probing: Another aspect of the financial services component is to establish a Cashew Fund to provide a mechanism for investment in small and medium cashew businesses.

How should a Cashew Fund be structured for investment in cashew businesses?

Market access and linkages –

5. Currently what kind of relationships do you have within the cashew value chain ?

Probing: What kind of relationships would be helpful to your enterprise?

Probing: One aspect of the market access and linkages component is to build cashew marketing associations. How effective, if at all, are current marketing associations in your area/country? In the SeGaBi region? How could they be improved?

Probing: How would cashew-marketing associations impact the cashew market in your country? In the SeGaBi region?

Probing: Another aspect is the capacity building of local trade associations. How effective, if at all, are current local trade associations in your area/country? In the SeGaBi region? How could they be improved?

Probing: Another aspect of the market access and linkages component is to develop and strengthen buyer-seller relationships. What kind of buyer-seller relationships would enhance the cashew market? How?

On-farm practices –

6. What is your opinion / perception / experience with farm management practices and on-farm agricultural practices?

Probing: What farm management practices would help the cashew value chain? What are some challenges to developing these practices?

Probing: The LIFFT-Cashew project will encourage good agricultural practices through demonstration farms, training, in-kind grants, and development of cashew nurseries, what kind of on-farm practices would be most useful to farmers and others along the cashew value chain?

Questions about the impact of the LIFFT-Cashew program on stakeholder relationships

7. What effects, if any, may the project have on the livelihood of value chain actors (CFW especially women, cashew processors, traders and exporters, etc.)

Probing: What effects/impacts, if any, will/may the project have on the environment of the value chain (environmental impact, sociocultural impact including gender, economic impact, peace and security)

Probing: In your opinion, and at the beginning of the program, what is needed to create and sustain positive program results?

8. Do you have any additional comments about the LIFFT-Cashew program?

**CASHEW RELATED ENTERPRISES KEY INFORMANT INTERVIEW PROTOCOL FRENCH
VERSION**

Date: _____

Temps: début _____ fin _____

Nom de l'interviewé-e: _____

Fonction: _____

Structure: _____

Téléphone: _____

Email: _____

Interviewer(s): _____

Traducteur: _____ **Preneur de notes** _____

Localisation: _____

Contexte / Notes d'observation (à propos de l'interviewé et de l'environnement de travail) _____

Guide d'entretien

Questions sur les moyens de subsistance de la personne interrogée

1. Veuillez **décrire brièvement l'entreprise liée à la noix de cajou** dans laquelle vous êtes?

Relance: Quel est votre rôle (propriétaire, partenaire, etc.)? Depuis combien de temps êtes-vous dans cette entreprise? Combien de staff travaille pour votre entreprise ?

Relance: Comment votre entreprise s'est développée face à la crise? A quels défis, le cas échéant, avez vous été confronté du fait de la crise?

Appreciations générales de l'interviewé-e sur le programme LIFFT-Cajou

2. Quelle a été votre implication au programme LIFFT jusqu'à présent?

- Relance : sur le processus (participation / consultation / etc.) Et maîtrise du programme (composantes, services offerts, etc .)

- Relance: Quelles sont vos impressions générales sur le programme LIFFT-Cajou? Quelle est votre opinion sur le programme?
- Relance: Pensez-vous que le programme LIFFT-Cajou aura un impact sur le secteur de l'anacarde dans votre région (à court / long terme)? Et dans la région de SeGaBi?
- Relance: au cas échéant quels sont, les principaux défis du programme LIFFT-Cajou? Comment ces défis pourraient-ils être pris en compte en début du programme?
- Relance: Pensez-vous que le programme LIFFT aura un impact direct sur votre entreprise? Si c'est le cas, comment?

Les questions concernant sur les quatre composantes du programme LIFFT-Cajou

Infrastructure de marché –

3. Quelle est votre expérience actuelle avec l'infrastructure du marché de l'anacarde (routes, marchés, magasins de stockage, etc.)?

- Relance: Quelles améliorations de l'infrastructure seraient les plus utiles à votre entreprise?
- Relance: Que pensez-vous serait en général nécessaire pour l'amélioration de l'infrastructure de marché pour le secteur de l'anacarde dans votre région / pays? Dans la SeGaBi?
- Relance: Un aspect de la composante infrastructure de marché est la réhabilitation des routes depuis les fermes d'anacarde jusqu'aux villes où sont les transformateurs. Quels genres d'améliorations seraient nécessaires? Pensez-vous que la réhabilitation des routes aura un impact sur le marché de l'anacarde?
- Relance: l'autre aspect de la composante infrastructure de marché est la manutention et le stockage après récolte. Quels sont types d'améliorations nécessaires? Comment l'amélioration de la manutention et du stockage post-récolte aura un impact sur le marché de l'anacarde?

Services financiers–

4. De quels services financiers disposez vous actuellement/ Quel est votre accès aux services financiers ?

- Relance: Quels services financiers pensez-vous les plus bénéfiques pour le fonctionnement de votre entreprise?
- Relance: Concernant LIFFT, un aspect de la composante services financiers est de faciliter et encourager les prêts contractés par les institutions financières locales et régionales aux producteurs et aux entreprises du secteur de l'anacarde. Quel genre de services financiers pensez-vous nécessaire pour aider les transformateurs et entreprises

du secteur? Quels sont les quelques contraintes du financement notées dans la chaîne de valeur.

-
- Relance: Un autre aspect de la composante des services financiers consiste à créer un fonds de garantie pour le secteur de l'anacarde afin de fournir un mécanisme d'investissement dans les petites et moyennes entreprises du secteur ? Comment un tel fonds devrait-il être structuré pour l'investissement dans la filière anacarde?

Accès au marché et liens d'affaires–

5. Quel genre de relation d'affaire avez-vous actuellement dans la chaîne de valeur anacarde

- Relance: Quel genre de relation serait utile à votre entreprise?
- Relance: Un objectif de la composante « accès au marché et liens d'affaires » est la création d'associations de commercialisation de cajou. Les associations actuelles de commercialisation dans votre région / pays sont-elles efficaces? Dans la région de SeGaBi? Comment pourraient-elles être améliorées?
- Relance: Comment les associations de marketing d'anacarde auraient-elles un impact sur le marché de la noix de cajou dans votre pays? Dans la région de SeGaBi?
- Relance: Un autre aspect est le renforcement des capacités des associations commerciales locales. Quelle efficacité, dit tout, sont les associations commerciales locales actuelles de votre région / pays sont-elles efficaces? Dans la région de SeGaBi? Comment pourraient-ils être améliorés?
- Relance: Un autre aspect de la composante accès aux marchés et liens d'affaires est de développer et de renforcer les relations acheteur-vendeur. Quel genre de relation acheteur-vendeur améliorerait le marché de la noix de cajou? Comment?

Pratiques agricoles –

6. Quelle est votre opinion / perception / expérience sur les techniques agricoles et de gestion des producteurs ?

- Relance: Quelles pratiques de gestion de la plantation aideraient la chaîne de valeur du cajou? Quels sont les défis pour développer ces pratiques?
- Relance: Le projet LIFFT-Cajou encouragera les bonnes pratiques agricoles à travers des fermes témoins, des formations, des subventions en nature et le développement de pépinières d'anacarde,
- Quel genre de pratiques agricoles serait le plus utile aux agriculteurs et aux autres acteurs de la chaîne de valeur de la noix de cajou ?
-

Impact du programme LIFFT-Cajou sur les parties prenantes

7. Quels effets, au cas échéant, le projet peut-il avoir sur les moyens de subsistance des acteurs de la chaîne de valeur (travailleurs communautaires (CFW) en particulier les femmes, les transformateurs de noix de cajou, les commerçants et les exportateurs, etc.)?

- Relance: Quels effets / impacts, s'il y en a, le projet aurait-il / pourrait-il avoir sur l'environnement de la chaîne de valeur (impact environnemental, impact socioculturel incluant le genre, impact économique, paix et sécurité)
- Relance: À votre avis, dès le début du programme, qu'est-ce qui est nécessaire pour créer et maintenir des résultats positifs?

8. Avez-vous d'autres commentaires sur le programme LIFFT-Cajou?

APPENDIX S: FINANCIAL INSTITUTIONS KEY INFORMANT INTERVIEW PROTOCOL

Date: _____

Time: start _____ end _____

Interviewee Name: _____

Title: _____

Organization: _____

Telephone: _____

Email: _____

Interviewer(s): _____

Translator: _____ **Notetaker** _____

Location: _____

Context / Observation Notes (about interviewee, working environment etc.) _____

Interview Questions

Questions about the interviewee's livelihood –

1. Please describe briefly your financial institution?

Probing: What is your role (owner, partner etc.)? How long have you been in this business?

Probing: How has your business developed in light of the conflict? What kinds of challenges, if any, have there been for your enterprise because of the conflict?

Questions about the interviewee's general thoughts about the LIFFT-Cashew program –

2. What has been your exposure to the LIFFT program so far?

Probing on process (participation /consultation /....) and knowledge of the program (components, services offered, etc....)

Probing: What are your general thoughts about the LIFFT-Cashew program? What is your opinion about the program?

Probing: How do you think the LIFFT-Cashew program will impact the cashew market in your region (short-term / long-term)? In the SeGaBi region?

Probing: What, if any, are the major challenges to the LIFFT-Cashew program? How might these challenges be addressed at the beginning of the program?

Probing: Do you think the LIFFT-Cashew program will directly impact your business? If so, how?

Questions about the four components of the LIFFT-Cashew program

Market infrastructure –

3. What is your current experience with the cashew market infrastructure (roads, markets, storage facilities)?

Probing: What infrastructure improvements would be most helpful to your enterprise?

Probing: What do you think is needed to improve market infrastructure in general for the cashew market in your area/country? In the SeGaBi region?

Probing: One aspect of the market infrastructure component is the rehabilitation of roads from the cashew farms to the towns where processors are located. What kinds of improvements are needed? How do you think the rehabilitation of roads will impact the cashew market?

Probing: Another aspect of the market infrastructure component is the post-harvest handling and storage. What kinds of improvements are needed? How do you think improving post-harvest handling and storage will impact the cashew market?

Financial services –

4. What kind of financial services are currently available to cashew farmers and other cashew-related businesses?

Probing: What financial services would you consider as the most helpful to cashew farmers and other cashew-related businesses?

Probing: With regards to LIFFT, one aspect of the financial services component is to facilitate and encourage increased lending by local and regional financial institutions to cashew farmers and businesses. What kind of financial services do you think are needed to help cashew farmers and other cashew-related businesses? What are some constraints in financing the value chain?

Probing: Another aspect of the financial services component is to establish a Cashew Fund to provide a mechanism for investment in small and medium cashew businesses. How should a Cashew Fund be structured for investment in cashew businesses?

Market access and linkages –

5. Currently what kind of relationships do you have within the cashew value chain?

Probing: What kind of relationships would be helpful to your financial institution?

Probing: One aspect of the market access and linkages component is to build cashew marketing associations. How effective, if at all, are current marketing associations in your area/country? In the SeGaBi region? How could they be improved?

Probing: How would cashew-marketing associations impact the cashew market in your country? In the SeGaBi region?

Probing: Another aspect is the capacity building of local trade associations. How effective, if at all, are current local trade associations in your area/country? In the SeGaBi region? How could they be improved?

Probing: Another aspect of the market access and linkages component is to develop and strengthen buyer-seller relationships. What kind of buyer-seller relationships would enhance the cashew market? How?

On-farm practices –

6. What is your opinion / perception / experience with farm management practices and on-farm agricultural practices?

Probing: What farm management practices would help the cashew value chain? What are some challenges to developing these practices?

Probing: The LIFFT-Cashew project will encourage good agricultural practices through demonstration farms, training, in-kind grants, and development of cashew nurseries, what kind of on-farm practices would be most useful to farmers and others along the cashew value chain?

Questions about the impact of the LIFFT-Cashew program on stakeholder relationships

7. What effects, if any, may the project have on the livelihood of value chain actors (CFW especially women, cashew processors, traders and exporters, etc.)?

Probing: What effects/impacts, if any, will/may the project have on the environment of the value chain (environmental impact, sociocultural impact including gender, economic impact, peace and security)

Probing: In your opinion, and at the beginning of the program, what is needed to create and sustain positive program results?

8. Do you have any additional comments about the LIFFT-Cashew program?

**FINANCIAL INSTITUTIONS KEY INFORMANT INTERVIEW PROTOCOL FRENCH
VERSION**

Date: _____

Heure: Début _____ **Fin** _____

Nom de l'interviewée : _____

Titre: _____

Organisation: _____

Telephone: _____

Email: _____

Interviewer(s): _____

Traducteur: _____ **Preneur de note** _____

Localisation: _____

Contexte / Notes d'observation (à propos de l'interviewé, de l'environnement de travail, etc.)

Questionnaire

Questions sur les moyens d'existence/les activités de la personne interrogée –

1. Veuillez décrire brièvement votre institution financière?

Relance: Quel est votre rôle/fonction? Depuis combien de temps travaillez-vous dans cette entreprise?

Pourriez vous nous préciser votre le champ d'intervention/ votre cadre légal et /ou géographique d'intervention

Relance: Quelle est votre perception du conflit et de son évolution et en quoi (au cas échéant) cela a pu impacter votre organisation /votre travail

Questions sur les réflexions générales de la personne interrogée sur le programme LIFFT-Cajou -

2. Quelle a été votre implication au programme LIFFT jusqu'à présent?

Relance : sur le processus (participation / consultation /) Et connaissance du programme (composantes, services offerts, etc ...)

Relance: Quelles sont vos réflexions générales sur le programme LIFFT-Cajou? Quelle est votre opinion sur le programme?

Relance: Comment pensez-vous que le programme LIFFT-Cajou aura un impact sur la chaîne de valeur anacarde dans votre région (à court / long terme)? Et dans la région de SeGaBi?

Relance: Quels sont, les principaux défis du programme LIFFT-Cajou? Comment ces défis pourraient-ils être adressés en début du programme?

Relance: Pensez-vous que le programme LIFFT aura un impact direct sur votre entreprise? Si c'est le cas, comment?

Questions sur les quatre composantes du programme LIFFT-Cajou

Infrastructure de marché:

3. Quelle est votre expérience actuelle avec l'infrastructure du marché de l'anacarde (routes, marchés, installations de stockage)?

Relance: Quelles améliorations des infrastructures seraient les plus utiles à votre entreprise?

Relance: Selon vous, qu'est-ce qui est nécessaire pour améliorer les infrastructures de marché en général pour le secteur de la noix de cajou dans votre région / pays? Dans la région de SeGaBi?

Relance: Un aspect de la composante infrastructure de marché est la réhabilitation des routes depuis les fermes d'anacarde vers les villes où se trouvent les transformateurs. Quels types d'améliorations seraient nécessaires? Comment/En quoi la réhabilitation des routes aura un impact sur le marché de l'anacarde?

Relance: Un autre aspect de la composante infrastructure de marché est la manutention et le stockage après récolte. Quels types d'améliorations sont nécessaires? Comment pensez-vous que l'amélioration de la manutention et du stockage post-récolte aura un impact sur le marché de la noix de cajou?

Services financiers–

4. Quels types de services financiers sont actuellement disponibles pour les producteurs d'anacardes et autres entreprises connexes ?

Relance: Quels services financiers considéreriez-vous comme les plus utiles aux producteurs d'anacarde et aux autres entreprises liées à l'anacarde? Quelles sont les contraintes liées au financement de la chaîne de valeur?

Relance: En ce qui concerne LIFFT, un aspect de la composante services financiers est de faciliter et d'encourager l'augmentation des prêts consentis par les institutions financières locales et régionales aux producteurs et aux entreprises de noix de cajou. Quel type de services financiers pensez-vous nécessaire pour aider les producteurs de noix de cajou et d'autres entreprises liées à la noix de cajou?

Relance: Un autre aspect de la composante des services financiers consiste à créer un fonds de garantie pour le secteur anacarde afin de fournir un mécanisme d'investissement dans les petites et moyennes entreprises de noix de cajou. Comment un tel fonds de garantie devrait-il être structuré pour l'investissement dans le business anacarde?

Accès aux marchés et liens d'affaires–

5. Actuellement, quel genre de relation d'affaire avez-vous dans la chaîne de valeur anacarde

Relance: Quel type de relation serait utile à votre institution financière?

Relance: Un aspect de l'élément d'accès au marché et de liens est la création d'associations de commercialisation de cajou. Dans quelle mesure les associations de marketing actuelles dans votre région / pays sont-elles efficaces? Dans la région de SeGaBi? Comment pourraient-ils être améliorés?

Relance: Comment les associations de commercialisation de la noix de cajou auraient-elles un impact sur le marché de la noix de cajou dans votre pays? Dans la région de SeGaBi?

Relance: Un autre aspect est le renforcement des capacités des associations commerciales locales. Dans quelle mesure les associations commerciales locales actuelles de votre région / pays sont-elles efficaces? Dans la région de SeGaBi? Comment pourraient-ils être améliorés?

Relance: Un autre aspect de la composante accès aux marchés et liens d'affaires est de développer et de renforcer les relations acheteur-vendeur. Quel type de relation acheteur-vendeur améliorerait le marché de la noix de cajou? Comment?

Pratiques agricoles et de gestion -

6. Quelle est votre opinion / perception / expérience avec les techniques agricoles et pratiques de gestions des producteurs?

Relance: Quelles pratiques de gestion des plantations aideraient la chaîne de valeur du cajou? Quels sont les défis pour développer ces pratiques?

Relance: Le projet LIFFT-Cajou encouragera les bonnes pratiques agricoles à travers des fermes de démonstration, des formations, des subventions en nature et le développement de pépinières d'anacarde, quel type de pratiques agricoles serait les plus utiles aux agriculteurs et aux autres acteurs de la chaîne de valeur de la noix de cajou?

Questions sur l'impact du programme LIFFT-Cajou sur les relations avec les parties prenantes

7. Quels effets, s'il y en a, le projet peut-il avoir sur les moyens de subsistance des acteurs de la chaîne de valeur (travailleurs communautaires (CFW) en particulier les femmes, les transformateurs de noix de cajou, les commerçants et les exportateurs, etc.)?

Relance: Quels effets / impacts, s'il y en a, le projet aurait-il / pourrait-il avoir sur l'environnement de la chaîne de valeur (impact environnemental, impact socioculturel incluant le genre, impact économique, paix et sécurité)

Relance: À votre avis, et à ce stade du démarrage du programme, qu'est-ce qui est nécessaire pour créer et maintenir des résultats positifs?

8. Avez-vous d'autres commentaires sur le programme LIFFT-Cajou?

**APPENDIX T: CASHEW TRADERS AND EXPORTERS KEY INFORMANT INTERVIEW
PROTOCOL**

Date: _____

Time: start _____ end _____

Interviewee Name: _____

Title: _____

Organization: _____

Telephone: _____

Email: _____

Interviewer(s): _____

Translator: _____ **Notetaker** _____

Location: _____

Context / Observation Notes (about interviewee, working environment etc.)

Interview Questions

Questions about the interviewee's livelihood –

1. Please describe briefly the cashew-trade and/or exportation that you are in?

Probing: What is your role (owner, partner etc.)? How long have you been in this enterprise?

Probing: How has your business developed in light of the conflict? What kinds of challenges, if any, have there been for your enterprise because of the conflict?

Questions about the interviewee's general thoughts about the LIFFT-Cashew program –

2. What has been your exposure with the LIFFT program so far?

Probing on process (participation /consultation /....) and knowledge of the program (components, services offered, etc....)

Probing: What are your general thoughts about the LIFFT-Cashew program? What is our opinion about the program?

Probing: How do you think the LIFFT-Cashew program will impact the cashew market in your region (short-term / long-term)? In the SeGaBi region?

Probing: What, if any, are the major challenges to the LIFFT-Cashew program? How might these challenges be addressed at the beginning of the program?

Probing: Do you think the LIFFT-Cashew program will directly impact your enterprise/your business? If so, how?

Questions about the four components of the LIFFT-Cashew program

Market infrastructure –

3. What is your current access to the cashew market infrastructure (roads, markets, storage facilities)?

Probing: What infrastructure improvements would be most helpful to your enterprise?

Probing: What do you think is needed to improve market infrastructure in general for the cashew market in your area/country? In the SeGaBi region?

Probing: One aspect of the market infrastructure component is the rehabilitation of roads from the cashew farms to the towns where processors are located. What kinds of improvements are needed? How do you think the rehabilitation of roads will impact the cashew market?

Probing: Another aspect of the market infrastructure component is the post-harvest handling and storage. What kinds of improvements are needed? How do you think improving post-harvest handling and storage will impact the cashew market?

Financial services –

4. What is your current access to financial services?

Probing: What financial services would you consider as the most helpful to your enterprise?

Probing: With regards to LIFFT, one aspect of the financial services component is to facilitate and encourage lending by local and regional financial institutions to cashew farmers and businesses. What kind of financial services do you think are needed to help cashew enterprises? What are some constraints in financing the value chain?

Probing: Another aspect of the financial services component is to establish a Cashew Fund to provide a mechanism for investment in small and medium cashew businesses. How should a Cashew Fund be structured for investment in cashew businesses?

Market access and linkages –

5. Currently what kind of relationships do you have within the value chain

Probing: What kind of relationships would be helpful to your enterprise?

Probing: One aspect of the market access and linkages component is to build cashew marketing associations. How effective, if at all, are current marketing associations in your area/country? In the SeGaBi region? How could they be improved?

Probing: How would cashew-marketing associations impact the cashew market in your country? In the SeGaBi region?

Probing: Another aspect is the capacity building of local trade associations. How effective, if at all, are current local trade associations in your area/country? In the SeGaBi region? How could they be improved?

Probing: One aspect of the market access and linkages component is to develop and strengthen buyer-seller relationships. What kind of buyer-seller relationships would enhance the cashew market? How?

On-farm practices –

6. What is your opinion / perception / experience with farm management practices and on-farm agricultural practices?

Probing: What farm management practices would help the cashew value chain? What are some challenges to developing these practices?

Probing: The LIFFT-Cashew project will encourage good agricultural practices through demonstration farms, training, in-kind grants, and development of cashew nurseries, what kind of on-farm practices would be most useful to farmers and others along the cashew value chain?

Questions about the sustainability of the LIFFT-Cashew program

7. What effects, if any, may the project have on the livelihood of value chain actors (CFW especially women, cashew processors, traders and exporters, etc.)?

Probing: What effects/impacts, if any, will/may the project have on the environment of the value chain (environmental impact, sociocultural impact including gender, economic impact, peace and security)

Probing: In your opinion, and at the beginning of the program, what is needed to create and sustain positive program results?

8. Do you have any additional comments about the LIFFT-Cashew program?

**CASHEW TRADERS AND EXPORTERS KEY INFORMANT INTERVIEW PROTOCOL
FRENCH VERSION**

Date: _____

Heure: Début _____ **Fin** _____

Nom de l'interviewé-e : _____

Titre: _____

Organisation: _____

Téléphone: _____

Email: _____

Interviewer(s): _____ **Traducteur:** _____ **Preneur de note** _____

Localisation: _____

Contexte / Notes d'observation (à propos de l'interviewé, de l'environnement de travail, etc.)

Guide d'entretien

Questions sur les moyens de subsistance de la personne interrogée –

1. Veuillez décrire brièvement votre commerce et/ou entreprise?

Relance: Quel est votre rôle (propriétaire, un partenaire, etc.)? Depuis combien de temps travaillez-vous dans cette entreprise?

Relance : Comment fonctionne t-elle, nombre d'emplois et liens de marchés ?

Relance: Quelle est votre perception du conflit et de son évolution et en quoi (au cas échéant) cela a pu impacter votre organisation /votre travail ?

Questions sur les réflexions générales de la personne interrogée sur le programme LIFFT-Cajou -

2. Avez-vous été en contact avec le programme LIFFT et si oui comment avez-vous entendu parler du programme LIFFT?

Relance : sur le processus (participation / consultation /) Et connaissance du programme (composantes, services offerts, etc ...) ?

Relance: Quelles sont vos réflexions générales sur le programme LIFFT-Cajou? Quelle est votre opinion sur le programme?

Relance: Comment pensez-vous que le programme LIFFT-Cajou aura un impact sur le marché de la noix de cajou dans votre région (à court / long terme)? Dans la région de SeGaBi?

Relance: Quels sont, les principaux défis du programme LIFFT-Cajou? Comment ces défis pourraient-ils être adressés au début du programme?

Relance: Pensez-vous que le programme LIFFT-Cashew aura un impact direct sur votre entreprise? Si c'est le cas, comment?

Questions sur les quatre composantes du programme LIFFT-Cajou-

Infrastructure de marché:

3. Quelle est votre expérience actuelle avec l'infrastructure du marché de l'anacarde (routes, marchés, installations de stockage)?

Relance: Quelles améliorations des infrastructures seraient les plus utiles à votre entreprise?

Relance: Selon vous, qu'est-ce qui en général est nécessaire pour améliorer les infrastructures de marché pour le secteur de la noix de cajou dans votre région / pays? Dans la région de SeGaBi?

Relance: Un aspect de la composante infrastructure de marché est la réhabilitation des routes depuis les fermes d'anacarde vers les villes où se trouvent les transformateurs. Quels types d'améliorations seraient nécessaires? Comment pensez-vous que la réhabilitation des routes aura un impact sur le marché de l'anacarde?

Relance: Un autre aspect de la composante infrastructure de marché est la manutention et le stockage après récolte. Quels types d'améliorations sont nécessaires? Comment pensez-vous que l'amélioration de la manutention et du stockage post-récolte aura un impact sur le marché de la noix de cajou?

Services financiers-

4. Quels types de services financiers sont actuellement disponibles pour les producteurs d'anacardes et autres entreprises connexes ?

Relance: Quels services financiers considèreriez-vous comme les plus utiles aux producteurs d'anacarde et aux autres entreprises liées à l'anacarde?

Relance: En ce qui concerne LIFFT, un aspect de la composante services financiers est de faciliter et d'encourager l'augmentation des prêts consentis par les institutions financières locales et régionales aux producteurs et aux entreprises de noix de cajou. Quel type de services financiers pensez-vous nécessaire pour aider les producteurs de noix de cajou et d'autres entreprises liées à la noix de cajou? Quelles sont les contraintes liées au financement de la chaîne de valeur?

Relance: Un autre aspect de la composante des services financiers consiste à créer un fonds de garantie pour le secteur de l'anacarde afin de fournir un mécanisme d'investissement aux petites et moyennes entreprises de noix de cajou. Comment un tel fonds devrait-il être structuré pour soutenir l'investissement dans le secteur anacarde?

Accès aux marchés / Liens commerciaux–

5. Actuellement, quel genre de relations avez-vous dans la chaîne de valeur noix de cajou

Relance: Quel type de relation serait utile à votre commerce / à votre entreprise?

Relance: Un aspect de la composante accès au marché et de liens d'affaires est la création d'associations de commercialisation du cajou. Dans quelle mesure les associations de commercialisation actuelles dans votre région / pays sont-elles efficaces? Dans la région de SeGaBi? Comment pourraient-ils être améliorés?

Relance: Comment les associations de commercialisation auraient-elles un impact sur le marché de la noix de cajou dans votre pays? Dans la région de SeGaBi?

Relance: Un autre aspect de la composante de l'accès au marché et des liens est de développer et de renforcer les relations acheteur-vendeur. Quel type de relation acheteur-vendeur améliorerait le marché de la noix de cajou? Comment?

Pratiques agricoles et de gestion -

6. Quelle est votre opinion / perception / expérience avec les techniques agricoles et pratiques de gestions des producteurs?

Relance: Quelles pratiques agricoles et de gestion des plantations aideraient la chaîne de valeur du cajou? Quels sont les défis pour développer ces pratiques?

Relance: Le projet LIFFT-Cajou prévoit d'encourager de bonnes pratiques agricoles à travers des fermes de démonstration, des formations, des subventions en nature et le développement de pépinières d'anacarde, quel type de pratiques agricoles et de gestion serait le plus utile aux agriculteurs et aux autres acteurs de la chaîne de valeur de la noix de cajou?

Questions sur les effets/ l'impact du programme LIFFT-

7. Quels effets, s'il y en a, le projet peut-il avoir sur les moyens de subsistance des acteurs de la chaîne de valeur (travailleurs communautaires (CFW) en particulier les femmes, les transformateurs de noix de cajou, les commerçants et les exportateurs, etc.)?

Relance: Quels effets / impacts, s'il y en a, le projet aurait-il / pourrait-il avoir sur l'environnement de la chaîne de valeur (impact environnemental, impact socioculturel incluant le genre, impact économique, paix et sécurité) ?

Relance: À votre avis, et au début du programme, qu'est-ce qui est nécessaire pour créer et maintenir des résultats positifs?

8. Avez-vous d'autres commentaires sur le programme LIFFT-Cajou?

APPENDIX U: GOVERNMENT OFFICIALS AND COMMUNITY LEADERS KEY INFORMANT INTERVIEW PROTOCOL

Date: _____

Time: start _____ end _____

Interviewee Name: _____

Title: _____

Organization: _____

Telephone: _____

Email: _____

Interviewer(s): _____

Translator: _____

Notetaker _____

Location: _____

Context / Observation Notes (about interviewee, working environment etc.)

Interview Questions

Questions about the interviewee's livelihood –

1. Please describe briefly the organization that you are in?

Probing: What is your role (owner, partner etc.)? How long have you been in this organization?

Probing: How has your role developed in light of the conflict? What kinds of challenges, if any, have there been for you and your organization because of the conflict?

Questions about the interviewee's general thoughts about the LIFFT-Cashew program –

2. What has been your exposure to the LIFFT program so far?

Probing on process (participation /consultation /....) and knowledge of the program (components, services offered, etc....)

Probing: What are your general thoughts about the LIFFT-Cashew program? What is your opinion about the program?

Probing: How do you think the LIFFT-Cashew program will impact the cashew market in your region (short-term / long-term)? In the SeGaBi region?

Probing: What, if any, are the major challenges to the LIFFT-Cashew program? How might these challenges be addressed at the beginning of the program?

Probing: Do you think the LIFFT-Cashew program will directly impact your organization? If so, how?

Questions about the four components of the LIFFT-Cashew program

Market infrastructure –

3. What is your current experience with the cashew market infrastructure (roads, markets, storage facilities)

Probing: What infrastructure improvements would be most helpful to the cashew value chain?

Probing: What do you think is needed to improve market infrastructure in general for the cashew market in your area/country? In the SeGaBi region?

Probing: One aspect of the market infrastructure component is the rehabilitation of roads from the cashew farms to the towns where processors are located. What kinds of improvements are needed? How do you think the rehabilitation of roads will impact the cashew market?

Probing: Another aspect of the market infrastructure component is the post-harvest handling and storage. What kinds of improvements are needed? How do you think improving post-harvest handling and storage will impact the cashew market?

Financial services –

4. What are your thoughts about access to financial services for cashew farmers and cashew-related businesses?

Probing: What financial services would you consider as the most helpful to cashew farmers and cashew-related businesses?

Probing: With regards to LIFFT, one aspect of the financial services component is to facilitate and encourage lending by local and regional financial institutions to cashew farmers and businesses. What kind of financial services do you think are needed to help cashew enterprises? What are some constraints in financing the value chain?

Probing: Another aspect of the financial services component is to establish a Cashew Fund to provide a mechanism for investment in small and medium cashew businesses. How should a Cashew Fund be structured for investment in cashew businesses?

Market access and linkages –

5. Currently what kind of relationships do you have within the cashew value chain?

Probing: What kind of relationships would be helpful to your organization?

Probing: One aspect of the market access and linkages component is to build cashew marketing associations. How effective, if at all, are current marketing associations in your area/country? In the SeGaBi region? How could they be improved?

Probing: How would cashew marketing associations impact the cashew market in your country? In the SeGaBi region?

Probing: Another aspect is the capacity building of local trade associations. How effective, if at all, are current local trade associations in your area/country? In the SeGaBi region? How could they be improved?

Probing: Another aspect of the market access and linkages component is to develop and strengthen buyer-seller relationships. What kind of buyer-seller relationships would enhance the cashew market? How?

On-farm practices –

6. What is your opinion / perception / experience with farm management practices and on-farm agricultural practices?

Probing: What farm management practices would help the cashew value chain? What are some challenges to developing these practices?

Probing: The LIFFT-Cashew project will encourage good agricultural practices through demonstration farms, training, in-kind grants, and development of cashew nurseries,

What kind of on-farm practices would be most useful to farmers and others along the cashew value chain?

Questions about the impact of the LIFFT-Cashew program on stakeholder relationships

7. What effects, if any, may the project have on the livelihood of value chain actors (CFW especially women, cashew processors, traders and exporters, etc.)

Probing: What effects/impacts, if any, will/may the project have on the environment of the value chain (environmental impact, sociocultural impact including gender, economic impact, peace and security) ?

Probing: In your opinion, and at the beginning of the program, what is needed to create and sustain positive program results?

8. Do you have any additional comments about the LIFFT-Cashew program?

**GOVERNMENT OFFICIALS AND COMMUNITY LEADERS KEY INFORMANT INTERVIEW
PROTOCOL FRENCH VERSION**

Heure: début _____ **fin** _____

Nom de l'interviewé (e): _____

Titre: _____

Organisation /Structure: _____

Téléphone: _____

Email: _____

Intervieweur(s) _____

Traducteur: _____ **Preneur de note** _____ **Localisation:** _____

Contexte / Notes d'observation (à propos de l'interviewé, de l'environnement de travail, etc.)

Questions d'entretien (Questions d'entrevue)

Questions sur l'organisation/*Structure de la personne interrogée.*

1. Veuillez décrire brièvement l'organisation/structure dans laquelle vous êtes.

Relance: Quel est votre rôle/fonction? En quoi consiste t-il.

Depuis combien de temps êtes-vous dans cette organisation?

Quel est le champ d'intervention (légal et/ou politique et /ou géographique et/ou thématique/sectoriel/programmatique) de votre organisation

Relance: Quelle est votre perception du conflit et de son évolution et en quoi (au cas échéant) cela a pu impacter votre organisation/votre travail

Questions sur les réflexions générales de la personne interrogée sur le **programme LIFFT-Cajou**

2. Avez vous été en contact avec le programme LIFFT et si oui comment?

Relance sur le processus (participation / consultation /) Et connaissance du programme (composantes, services offerts, etc. ...)

Relance: Quelles sont vos réflexions générales sur le programme LIFFT-Cajou? Quelle est votre opinion sur le programme? Alignement avec la politique sectorielle et /ou de la Collectivité territoriale

Relance: Pensez-vous que le programme LIFFT-Cashew aura un impact direct sur votre organisation? Si c'est le cas, comment?

Relance: Comment pensez-vous que le programme LIFFT-Cajou , le cas échéant, aura un impact sur le marché de la noix de cajou dans votre région (à court / long terme)? Et dans la région de SeGaBi?

Relance: A quels défis pourrait le programme être confrontés? Comment ces défis pourraient-ils être adressés au début du programme?

Questions sur les quatre composantes du programme LIFFT-Cajou

Infrastructure de marché.

3. Infrastructure du marché

Quelle est votre expérience actuelle avec l'infrastructure de marché relative à la chaîne de valeur anacarde (routes, marchés, installations de stockage)?

Relance: Selon vous, quelles améliorations de l'infrastructure seraient les plus utiles à la chaîne de valeur anacarde?

Relance: Selon vous, qu'est-ce qui est nécessaire en général pour améliorer l'infrastructure de marché du secteur de l'anacarde dans votre région / pays? Dans la région de SeGaBi?

Relance: Un aspect de la composante infrastructure de marché est la réhabilitation des routes depuis les fermes de noix de cajou vers les villes où se trouvent les transformateurs. Quels types d'améliorations sont nécessaires? Comment pensez-vous que la réhabilitation des routes aura un impact sur le marché de la noix de cajou?

Relance: Un autre aspect de la composante infrastructure de marché est la manutention et le stockage après récolte. Quels types d'améliorations sont nécessaires? Comment pensez-vous que l'amélioration de la manutention et du stockage post-récolte aura un impact sur le marché de la noix de cajou?

Services financiers

4. Que pensez-vous de l'accès aux services financiers pour les producteurs de noix de cajou et les entreprises liées à la noix de cajou?

Relance: Quels services financiers considéreriez-vous comme les plus utiles aux producteurs de noix de cajou et aux entreprises liées à la noix de cajou?

Relance: En ce qui concerne LIFFT, un aspect de la composante des services financiers est de faciliter et d'encourager les prêts accordés par les institutions financières locales et régionales aux producteurs et aux entreprises de noix de cajou. Quel type de services financiers pensez-vous nécessaire pour aider les entreprises de noix de cajou? Quelles sont les contraintes liées au financement de la chaîne de valeur?

Relance: Un autre aspect de la composante des services financiers est la création d'un fonds de garantie pour fournir au secteur mécanisme d'investissement dans les petites et moyennes entreprises de noix de cajou. Comment un tel fonds devrait-il être structuré pour l'investissement dans le business anacarde?

Accès et liens au marché

5. Actuellement dans la chaîne de valeur de la noix de cajou, quel genre de relations avez-vous? Et avec qui ?

Relance: Quel genre de relations serait utile à votre organisation?

Relance: Un aspect de la composante accès au marché et de liens d'affaires consiste en la création d'associations de commercialisation du cajou. Dans quelle mesure les associations de commercialisations actuelles dans votre région / pays sont-elles efficaces? Dans la région de SeGaBi? Comment pourraient-elles être améliorées?

Relance: Comment les associations de commercialisation de la noix de cajou pourraient-elles avoir un impact sur le marché de la noix de cajou

Relance: Un autre aspect de la composante « accès au marché et des liens d'affaires » est de développer et renforcer les relations acheteur-vendeur. Quel type de relation acheteur-vendeur améliorerait le marché de la noix de cajou? Comment?

Pratiques agricoles et de gestion des fermes

6. Quelle est votre opinion / perception / expérience sur les pratiques de gestion et les pratiques agricoles dans les plantations d'anacarde?

Relance: Quelles pratiques de gestion agricole et managériale aideraient la chaîne de valeur du cajou? Quels sont les défis à développer ces pratiques?

Relance: Le projet LIFFT-Cajou encouragera de bonnes pratiques agricoles à travers des fermes de démonstration, des formations, des subventions en nature et le développement de pépinières de noix de cajou, Quel type de pratiques dans les plantations serait le plus utile aux agriculteurs et aux autres acteurs de la chaîne de valeur de la noix de cajou?

Questions sur l'impact et la durabilité du programme LIFFT-Cashew sur les relations avec les parties prenantes

7. Quels effets, le cas échéant, le programme peut-il avoir sur les moyens de subsistance des acteurs de la chaîne de valeur (manœuvres contre travail (CFW) en particulier les femmes, les transformateurs de noix de cajou, les commerçants et les exportateurs, etc.)?

Relance: Quels effets / impacts, le cas échéant, le projet aurait-il / pourrait-il avoir sur l'environnement de la chaîne de valeur (impact environnemental, impact socioculturel incluant le genre, impact économique, paix et sécurité)

Relance: À votre avis, et au début du programme, qu'est-ce qui est nécessaire pour créer et maintenir des résultats positifs?

8. Avez-vous d'autres commentaires sur le programme LIFFT-Cajou?

APPENDIX V: USDA STAFF AND SFL STAFF KEY INFORMANT INTERVIEW PROTOCOL

Date: _____

Time: start _____ end _____

Interviewee Name: _____

Title: _____

Organization: _____

Telephone: _____

Email: _____

Interviewer(s): _____

Translator: _____ **Notetaker** _____

Location: _____

Context / Observation Notes (about interviewee, working environment etc.)

Interview Questions

Questions about the interviewee's livelihood –

1. Please describe briefly the organization that you are in?

Probing: What is your role? How long have you been in this organization?

Probing: How has your organization changed in light of the conflict? What kinds of challenges, if any, have there been for your organization because of the conflict?

Questions about the interviewee's general thoughts about the LIFFT-Cashew program –

2. What has been your exposure to the LIFFT program so far?

Probing on process (participation /consultation /....) and knowledge of the program (components, services offered, etc....)

Probing: What are your general thoughts about the LIFFT-Cashew program? What is your opinion about the program?

Probing: How do you think the LIFFT-Cashew program will impact the cashew market in your region (short-term / long-term)? In the SeGaBi region?

Probing: What, if any, are the major challenges to the LIFFT-Cashew program? How might these challenges be addressed at the beginning of the program?

Probing: Do you think the LIFFT-Cashew program will directly impact your organization? If so, how?

Questions about the four components of the LIFFT-Cashew program

Market infrastructure –

3. What is your current experience with the cashew market infrastructure (roads, markets, storage facilities)?

Probing: What infrastructure improvements would be most helpful to the cashew value chain?

Probing: What do you think is needed to improve market infrastructure in general for the cashew market in your area/country? In the SeGaBi region?

Probing: One aspect of the market infrastructure component is the rehabilitation of roads from the cashew farms to the towns where processors are located. What kinds of improvements are needed? How do you think the rehabilitation of roads will impact the cashew market?

Probing: Another aspect of the market infrastructure component is the post-harvest handling and storage. What kinds of improvements are needed? How do you think improving post-harvest handling and storage will impact the cashew market?

Financial services –

4. What is your understanding of the financial services that are currently available to the cashew value chain?

Probing: What financial services would you consider as the most helpful to the cashew value chain?

Probing: With regards to LIFFT, one aspect of the financial services component is to facilitate and encourage lending by local and regional financial institutions to cashew

farmers and businesses. What kind of financial services do you think are needed to help cashew enterprises? What are some constraints in financing the value chain?

Probing: Another aspect of the financial services component is to establish a Cashew Fund to provide a mechanism for investment in small and medium cashew businesses. How should a Cashew Fund be structured for investment in cashew businesses?

Market access and linkages –

5. Currently what kind of relationships do you have within the cashew value chain?

Probing: What kind of relationships would be helpful to your organization?

Probing: One aspect of the market access and linkages component is to build cashew marketing associations. How effective, if at all, are current marketing associations in your area/country? In the SeGaBi region? How could they be improved?

Probing: How would cashew-marketing associations impact the cashew market in your country? In the SeGaBi region?

Probing: Another aspect is the capacity building of local trade associations. How effective, if at all, are current local trade associations in your area/country? In the SeGaBi region? How could they be improved?

Probing: Another aspect of the market access and linkages component is to develop and strengthen buyer-seller relationships. What kind of buyer-seller relationships would enhance the cashew market? How?

On-farm practices –

6. What is your opinion / perception / experience with farm management practices and on-farm agricultural practices?

Probing: What farm management practices would help the cashew value chain? What are some challenges to developing these practices?

Probing: The LIFFT-Cashew project will encourage good agricultural practices through demonstration farms, training, in-kind grants, and development of cashew nurseries, what kind of on-farm practices would be most useful to farmers and others along the cashew value chain?

Questions about the impact of the LIFFT-Cashew program on stakeholder relationships

7. What effects, if any, may the project have on the livelihood of value chain actors (CFW especially women, cashew processors, traders and exporters, etc.)?

Probing: What effects/impacts, if any, will/may the project have on the environment of the value chain (environmental impact, sociocultural impact including gender, economic impact, peace and security)?

Probing: In your opinion, and at the beginning of the program, what is needed to create and sustain positive program results?

8. Do you have any additional comments about the LIFFT-Cashew program?

**USDA STAFF AND SFL STAFF KEY INFORMANT INTERVIEW PROTOCOL FRENCH
VERSION**

Date: _____

Heure: **début :** _____ **fin :** _____

Nom de l'interviewé(e)à: _____

Titre: _____

Organisation: _____

Téléphone: _____

Email: _____

Intervieweur (s): _____

Traducteur: _____ **Preneur de note :** _____

Localisation: _____

Contexte / Notes d'observation (à propos de l'interviewé, de l'environnement de travail, etc.) : _____

Questions d'entretien

Questions sur les moyens de subsistance de la personne interrogée -

1. Veuillez décrire brièvement l'organisation dans laquelle vous êtes?

Sondage: Quel est votre rôle? Depuis combien de temps êtes-vous dans cette organisation?

Sondage: Comment votre organisation a-t-elle changé à la lumière du conflit? Quels types de défis, le cas échéant, y a-t-il eu pour votre organisation à cause du conflit?

Questions sur les réflexions générales de la personne interrogée sur le programme LIFFT-Cajou -

2. Quelle a été votre exposition au programme LIFFT jusqu'à présent?

Sondage sur le processus (participation / consultation /) Et connaissance du programme (composantes, services offerts, etc ...)

Sonder: Quelles sont vos réflexions générales sur le programme LIFFT-Cajou? Quelle est votre opinion sur le programme?

Sondage: Comment pensez-vous que le programme LIFFT-Cajou aura un impact sur le marché de la noix de cajou dans votre région (à court / long terme)? Dans la région de SeGaBi?

Sondage: Quels sont, le cas échéant, les principaux défis du programme LIFFT-Cajou? Comment ces défis pourraient-ils être traités au début du programme?

Sondage: Pensez-vous que le programme LIFFT-Cashew aura un impact direct sur votre organisation? Si c'est le cas, comment?

Questions sur les quatre composantes du programme LIFFT-Cajou

Infrastructure de marché -

3. Quelle est votre expérience actuelle avec l'infrastructure du marché de la noix de cajou (routes, marchés, installations de stockage)?

Sondage: Quelles améliorations de l'infrastructure seraient les plus utiles à la chaîne de valeur de la noix de cajou?

Sonder: Selon vous, qu'est-ce qui est nécessaire pour améliorer les infrastructures de marché en général pour le marché de la noix de cajou dans votre région / pays? Dans la région de SeGaBi?

Sondage: Un aspect de la composante infrastructure de marché est la réhabilitation des routes depuis les fermes de noix de cajou vers les villes où se trouvent les transformateurs. Quels types d'améliorations sont nécessaires? Comment pensez-vous que la réhabilitation des routes aura un impact sur le marché de la noix de cajou?

Sondage: Un autre aspect de la composante infrastructure de marché est la manutention et le stockage après récolte. Quels types d'améliorations sont nécessaires? Comment pensez-vous que l'amélioration de la manutention et du stockage post-récolte aura un impact sur le marché de la noix de cajou?

Services financiers -

4. Quelle est votre compréhension des services financiers actuellement disponibles pour la chaîne de valeur de l'anacarde?

Sondage: Quels services financiers considéreriez-vous comme les plus utiles à la chaîne de valeur de la noix de cajou?

Sondage: En ce qui concerne LIFFT, un aspect des composants services financiers est de faciliter et d'encourager les prêts accordés par les institutions financières locales et régionales aux producteurs et aux entreprises de noix de cajou. Quel type de services financiers pensez-vous nécessaire pour aider les entreprises de noix de cajou? Quelles sont les contraintes liées au financement de la chaîne de valeur?

Sondage: Un autre aspect de la composante des services financiers consiste à créer un fonds pour les noix de cajou afin de fournir un mécanisme d'investissement dans les petites et moyennes entreprises de noix de cajou.

Comment un fonds de noix de cajou devrait-il être structuré pour l'investissement dans des affaires de noix de cajou?

Accès au marché et liens -

5. Actuellement, quel genre de relations avez-vous dans la chaîne de valeur de la noix de cajou

Sondage: Quel genre de relations serait utile à votre organisation?

Sondage: Un aspect de l'élément d'accès au marché et de liens est la création d'associations de commercialisation du cajou. Dans quelle mesure les associations de marketing actuelles dans votre région / pays sont-elles efficaces? Dans la région de SeGaBi? Comment pourraient-ils être améliorés?

Sondage: Comment les associations de commercialisation de la noix de cajou auraient-elles un impact sur le marché de la noix de cajou dans votre pays? Dans la région de SeGaBi?

Sondage: Un autre aspect est le renforcement des capacités des associations commerciales locales. Dans quelle mesure les associations commerciales locales actuelles dans votre région / pays sont-elles efficaces? Dans la région de SeGaBi? Comment pourraient-ils être améliorés?

Sondage: Un autre aspect de la composante de l'accès au marché et des liens est de développer et de renforcer les relations acheteur-vendeur. Quel type de relation acheteur-vendeur améliorerait le marché de la noix de cajou? Comment?

Pratiques fermières -

6. Quelle est votre opinion / perception / expérience avec les pratiques de gestion agricole et les pratiques agricoles à la ferme?

Sondage: Quelles pratiques de gestion agricole aideraient la chaîne de valeur du cajou? Quels sont les défis à développer ces pratiques?

Sondage: Le projet LIFFT-Cajou encouragera de bonnes pratiques agricoles à travers des fermes de démonstration, des formations, des subventions en nature et le développement de pépinières de noix de cajou,

Quel type de pratiques à la ferme serait le plus utile aux agriculteurs et aux autres acteurs de la chaîne de valeur de la noix de cajou?

Questions sur l'impact du programme LIFFT-Cajou sur les relations avec les parties prenantes

7. Quels effets, le cas échéant, le projet peut-il avoir sur les moyens de subsistance des acteurs de la chaîne de valeur (CFW en particulier les femmes, les transformateurs de noix de cajou, les commerçants et les exportateurs, etc.)?

Sondage: Quels effets / impacts, le cas échéant, le projet aura-t-il / pourrait-il avoir sur l'environnement de la chaîne de valeur (impact environnemental, impact socioculturel incluant le genre, impact économique, paix et sécurité)

Sondage: À votre avis, et au début du programme, qu'est-ce qui est nécessaire pour créer et maintenir des résultats positifs?

8. Avez-vous d'autres commentaires sur le programme LIFFT-Cajou?

APPENDIX W: LIST OF COMPLETED KEY INFORMANTS

REDACTED FROM PUBLIC REPORT
Pages 125-127

REDACTED FROM PUBLIC REPORT
Pages 125-127

REDACTED FROM PUBLIC REPORT
Pages 125-127

**APPENDIX X: QUASI-EXPERIMENTAL & PERFORMANCE DESIGNS PRODUCER SURVEY
VILLAGES**

REDACTED FROM PUBLIC REPORT
Pages 128-129

REDACTED FROM PUBLIC REPORT
Pages 128-129

APPENDIX Y: SURVEYED CASHEW-RELATED ENTERPRISES

REDACTED FROM PUBLIC REPORT
Page 130

APPENDIX Z: PUBLIC DISCLOSURE AGREEMENT

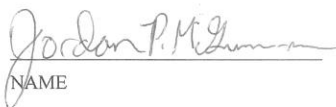
Public Disclosure of USDA-Funded Evaluations Acknowledgement of Responsibility to Safeguard Sensitive Information

USDA is committed to full disclosure of evaluation reports, methods, findings, and data produced by the Agency or partners receiving USDA funding. This is guided by Agency policies and directives, including the open government initiative¹ and the Foreign Agricultural Service Monitoring and Evaluation Policy². The Monitoring and Evaluation Policy requires final evaluations to be submitted within three months following the evaluation field work and before the project closes. To increase transparency and learning, USDA final evaluation reports will be made publicly available.

Under these public disclosure requirements, it is the responsibility of USDA awardees to safeguard sensitive information at all times. Evaluations should NOT release:

1. Proprietary information owned by third parties.
2. Information that could put individual safety at risk or personally identifiable information (PII). PII is information that can be used to reasonably infer the identity of an individual, directly or indirectly.

The signature below certifies that the evaluation the USDA grantee is submitting does not contain proprietary information owned by third parties or PII.


NAME


DATE


Organization

Requests for an exemption from making an evaluation report publicly available should be sent to traci.johnson@fas.usda.gov. Requests should:

- Provide a clear and compelling written justification for why a report should not be made public.
- Be accompanied by a copy of the Evaluation report (electronic attachment is fine) with the information of particular concern identified or highlighted.
- Specify the requesting office's preferred outcome (e.g. redact a portion of the report from publication).

Exemptions from public disclosure will not be made for the following reasons:

- Findings are unexpected, negative and/or embarrassing to USDA.
- USDA or partners disagree with the findings. In this case, a Statement of Differences may be attached as an annex explaining the disagreement.

¹ For more information and the USDA Open Government Initiative please see: <http://www.usda.gov/open>

² The Monitoring and Evaluation Policy is available at: <http://www.fas.usda.gov/programs/resources/monitoring-and-evaluation-policy>

Public Disclosure of USDA-Funded Evaluations Acknowledgement of Responsibility to Safeguard Sensitive Information

USDA is committed to full disclosure of evaluation reports, methods, findings, and data produced by the Agency or partners receiving USDA funding. This is guided by Agency policies and directives, including the open government initiative¹, the Food Assistance Division Monitoring and Evaluation Policy², and OMB's Monitoring and Evaluation Guidelines for Federal Departments and Agencies that Administer United States Foreign Assistance³. To increase transparency and learning, USDA evaluation reports will be made publicly available.

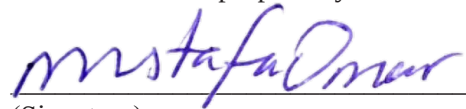
Under these public disclosure requirements, it is the responsibility of USDA awardees to safeguard sensitive information at all times. Evaluations should NOT release:

1. Proprietary information owned by third parties.
2. Information that could put individual safety at risk or personally identifiable information (PII). PII is information that can be used to reasonably infer the identity of an individual, directly or indirectly.

The signature below certifies that the evaluation the USDA grantee is submitting titled

LIFFT-Cashew Project Baseline Report

does not contain proprietary information owned by third parties or PII.


(Signature)

Shelter For Life International
Organization

Mustafa Omar, CEO
Printed Name and Title

December 6, 2019
Date

Requests for an exemption from making an evaluation report publicly available should be sent to traci.johnson@fas.usda.gov. Requests should:

- Provide a clear and compelling written justification for why a report should not be made public.
- Be accompanied by a copy of the Evaluation report (electronic attachment is fine) with the information of particular concern identified or highlighted.
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- Findings are unexpected, negative and/or embarrassing to USDA.
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³ The Monitoring and Evaluation Guidelines for Federal Departments and Agencies that Administer United States Foreign Assistance are available at: <https://www.whitehouse.gov/wp-content/uploads/2017/11/M-18-04-Final.pdf>

APPENDIX AA: CONFLICT OF INTEREST STATEMENT

Conflict of Interest Statement

I certify that I have no material or financial relationship with SFL beyond the evaluation work completed for this baseline assessment of the LIFFT project. I also certify that no other relationship, bias, or ethical conflict prevents me from conducting this assessment in light of the Request for Proposal evaluation criteria.

Furthermore, I agree to notify the SFL M&E manager and/or the USDA staff if my personal or financial relationship changes relevant to this statement. Additionally, I agree to let SFL and USDA know if I have any related or other changes that would appear to represent a conflict of interest in relation to this project.

Jordan P. McGurran-Meinen

Name

Jordan P. McGurran-Meinen

Name (Signature)

President

Title

Arete Evaluation Collaborative

Organization

7/1/2018

Date

APPENDIX BB: ARETE'S RECOMMENDATIONS FOR FUTURE SFL EVALUATION WORK

Based on Arete's work for this baseline assessment, the following recommendations are those the Arete Team would like to share with SFL in order to improve future external evaluation processes:

1. **Provide at least a Month for Drafting the Inception Report:** In order to allow enough time to get a full sense of the project, time to fully delve into the literature of the project, and time to spend concentrating on writing the inception report, at least a month should be providing for drafting the inception report in order to produce as well-done, organized, and prepare draft as might be possible.
2. **Provide a least a Month between the Handing in of the Inception Report and Fieldwork:** In order to allow appropriate time to prepare for the data collection, including organizing logistics and funds, it is important that at least a month of time is given between the handing in the inception report and the start of the fieldwork phase.
3. **Provide 35-45% of the Evaluation Budget to the Evaluation Team Before Fieldwork/Data Collection:** Much of a project's implementation depends on being able to have the resources at the beginning of the project and to be able to move the resources to the appropriate places in order to begin work well, this is of course the same for assessment and evaluation projects that are parts of larger project. It is normal practice to provide 35-45% before the beginning of the fieldwork in assessment and evaluation, and this should be done several weeks before the field so a team has time so that the assessment or evaluation team would be able to be well prepared to start their work and not have to experience the difficulties of trying to run the assessment/evaluation implementation with little money. Related to this, deliverables should be reconceived or adjusted as necessary in order to make this happen.
4. **Have Evaluation Budget Money be Available In-Country from the Country Office:** As is the practices of some organizations, the budgeted money for an assessment or evaluation can easily be available in country and can be given to the evaluation team for their work in country, this can be another way to ease a need for finances among evaluation teams, and is not much different than paying or providing advances to other contractors or consultants who happen to be in country.
5. **Clarify to a Greater Extent about the Level of Engagement SFL Is Seeking in Relation to the Evaluation Team:** In some projects, the program staff work directly alongside the evaluation time and directly set the agenda for planning, data collection, etc. and in other projects, the program staff let the evaluation team lead and manage everything. It would have been helpful if SFL staff would have been more clear about what level of engagement they wanted, particularly as different staff members seemed to have different ideas about what was appropriate. At different times, there were different implicit messages and the evaluation team was a bit confused about when we should be

engaging in questions, of which there were several, and the status of the internal M&E team members who were occupied during large portions of our data collection.

6. **All Technical Software and Hardware Should Be Ready Before Training and Data Collection Start:** In order to allow data collection to move smooth and for everyone to be using, and trained on, the most recent tools it is important that all technical software is read and available before training and data collection. Additionally, it is most helpful if all of the hardware and accessories are fully ready before data collection starts to both smooth the process of data collection but also to provide maximum protection to the hardware from the very beginning of the data collection phase.
7. **Invest More in Technical Resources or Personnel Related to Specialized Software Management:** Specialized software often requires extra knowledge that are not readily available to all stakeholders, we would recommend that SFL invest more in resources to help people working on assessment and evaluation to be able to better engage with specialized software that SFL may want to use. For example, hiring a dedicated data collection software consultant or staff person would ease difficulties with working with new software as well as reduce stress in data collection.
8. **Remember both Quantitative and Qualitative Data Collection are Important for Mixed-Method Designs:** Both qualitative and quantitative data are helpful tools to better understand particular phenomena. Qualitative data should not merely considered “anecdotal” as compared to quantitative method – both have their own assumptions, methodologies, tools, and both provide helpful information to chart the programmatic path forward. Quantitative data, though beloved by certain types of policy analysts and researchers, does not provide all that one needs to know about programs and their implementation, and can suffer from its own issues as well.

Appendix CC: Baseline Performance Indicators

*Gray rows are household producer survey results and white rows are enterprise survey results

Performance Indicator	Indicator Definition and Unit of Measure	Data Source	Method/Approach of Data Collection or Calculation	Question Involved in the Calculation	Value (USD/Kg/Litre/Tonnes)
Value of sales of project beneficiaries (Standard #13)	The value of all cashew sales by direct beneficiaries. Disaggregated by commodity type; product (RCN, kernel, or by-product); kernel quality (in the case of kernel); and by location of seller. Unit: USD	Household producer survey	The calculation concerns only potential beneficiaries of road rehabilitation who participated in the survey (all treatment B was excluded) We used also these two approaches: · Declared values (no possibility to disaggregate between product using that approach) · Calculated value (we multiply the mean price of sale by the volume declared and the procedure is repeated for each product)	Total revenue declared for cashew apple and RCN (Q173) Separate revenue from RCN and cashew apple (Q63, Q64, Q65, Q66 for prices and Q57, Q58 for volume) Questions related to location, namely the country.	Senegal (Total value) Declared: 633,924 USD Calculated: 546,718 USD Guinea-Bissau (Total value) Declared: 853,618 USD Calculated: 558,457 USD Gambia (Total value) Declared: 145,046 USD Calculated: 93,747 USD RCN (Declared)[9] Senegal: 561,811 USD Gambia: 124,604 USD Guinea-Bissau: 717,777 USD Apple juice (Calculated) Senegal: 8,700 USD Gambia: 2,531 USD Guinea-Bissau: 7,048 USD
Value of sales of project beneficiaries (Standard #13)	The value of all cashew sales by direct beneficiaries. Disaggregated by commodity type; product (RCN, kernel, or by-product); kernel quality (in the case of kernel); and by location of seller Unit: USD	Enterprise survey	We aggregated the revenue declared by the respondent for each commodities and we converted it in USD	Total revenue based on enterprise activity (Q13)	Total revenue from processing cashew kernel for international market in 2017: Gambia: 158,773 USD; Guinea-Bissau: 406,962 USD; Senegal: 595,586 USD Total revenue from roasted cashew for international market (exportation) in 2017: Gambia: 8,988USD; Guinea-Bissau: 0 USD; Senegal: 36,666 USD Total revenue from roasted cashew for domestic market in 2017: Gambia: 34,340 USD; Guinea-Bissau: 69,444 USD; Senegal: 659,495 USD Total revenue from cashew apple processing for domestic market in 2017: Gambia: 481.5 USD; Guinea-Bissau: 58,222 USD; Senegal: 1,666 USD Total revenue from WW320 for domestic market in 2017: Gambia: 11,678 USD; Guinea-Bissau: 460,740 USD; Senegal: 0 USD Total revenue from LP (Large Pieces) for domestic market in 2017: Gambia: 198 USD; Guinea-Bissau: 0 USD; Senegal: 0 USD Total revenue from WS (white splits) for domestic market in 2017: Gambia: 1,231 USD; Guinea-Bissau: 0 USD; Senegal: 0 USD Total revenue from other grade for domestic market in 2017: Gambia: 0 USD; Guinea-Bissau: 0 USD; Senegal: 7,323 USD
Volume of commodities sold by project beneficiaries (Standard #14)	The volume by weight of all cashew sales by direct project beneficiaries. Disaggregated by commodity type; product (RCN, kernel, or by-product); kernel quality (in the case of kernel); and by location of seller Unit: Metric ton	Household producer survey	The calculation concerns only potential beneficiaries of road rehabilitation who participated in the survey (all treatment B was excluded) The volumes are direct declared volumes of RCN and cashew apple juice produced.	Questions Q57 and Q58 related to volumes and questions related to location, namely the country.	Total volume (for all potential beneficiaries): RCN: 930.098 T Apple juice: 82,093 litre Senegal RCN: 422.073 T Apple juice: 28,762 litre Gambia RCN: 72.123 T Apple juice: 4,931.363 litre Guinea-Bissau RCN: 435.902 T Apple juice: 48,400 litre
Volume of commodities sold by project beneficiaries (Standard #14)	The volume by weight of all cashew sales by direct project beneficiaries. Disaggregated by commodity type; product (RCN, kernel, or by-product); kernel quality (in the case of kernel); and by location of seller Unit: Metric ton	Enterprise survey	For each categories we aggregated the volumes declared by the respondents	Total volume based on enterprise activity (Q13)	Total volume exportation of RCN in 2017 (Tonnes): Gambia: 10,000 T Guinea-Bissau: 0 T Senegal: 0 T Total volume of cashew kernel for international market in 2017 (Tonnes): Gambia: 9.884 T Guinea-Bissau: 30 T Senegal: 65.518 T Total Volume total of roasted cashew for domestic market in 2017 (Tonnes): Gambia: 2.746 T Guinea-Bissau: 3.75 T Senegal: 38.455 T Total volume exportation of roasted in 2017 (Tonnes): Gambia: 0.06 T Guinea-Bissau: 0 T Senegal: 0 T Total Volume total of cashew apple for domestic market in 2017 (L): Gambia: 0 T Guinea-Bissau: 38.494 T Senegal: 0 T Total volume of WW320 in 2017 (Tonnes): Gambia: 43.759845 T Guinea-Bissau: 34 T Senegal: 0 T Total volume of WW180 in 2017 (Tonnes): Gambia: 40 T Guinea-Bissau: 0 T Senegal: 0 T Total volume of LP (Large Pieces) in 2017 (Tonnes): Gambia: 12.515478 T Guinea-Bissau: 0 T Senegal: 0 T Total Volume de WS (white splits) in 2017 (Tonnes): Gambia: 20.645034 T Guinea-Bissau: 0 T Senegal: 0 T Total volume of other grade in 2017 (Tonnes): Gambia: 110 T Guinea-Bissau: 12 T Senegal: 34.726 T

Change in RCN farm-gate price received by beneficiary producers (Custom indicator #3)	The change in the average farm-gate price for participants over the life of the program. Understanding farmers' selling price, helps to understand if they can get a fair price as participants, regardless if external price fluctuations. Disaggregated by gender and location of producer. Unit: USD	Household producer survey	This will serve as reference for follow up The prices reported here are baseline prices that will be used to track the changes during follow-up We used here the mean price of the different products sold by the potential beneficiaries of the project. Mean price was calculated using highest and lowest prices declared.	Questions involved are those related to prices (Q63, Q64, Q65, Q66) and place of sale (Q74)	Average Farm gate prices for beneficiaries (by location): Senegal: RCN: 1.289046 USD o Women:1.218516 o Men:1.300710 CAJ: 0.471390704 USD o Women:1.341669 o Men:1.248100 Gambia: RCN: 1.257662 USD o Women:1.341669 o Men:1.248100 CAJ: 0.4713907 USD o Women:0.167704 o Men:0.5726192 Guinea Bissau: RCN: 1.257787 USD o Women:1.262445 o Men:1.257282 CAJ: 0.163385 USD o Women:0.167704 o Men: 0.162953
Number of individuals who have applied new techniques or technologies as a result of USDA assistance (Standard #2)	Number of farming individuals who received training (Standard #16) and later newly applied the technology, as determined by the Agriculture Team. Individuals will only be counted once per fiscal year. Disaggregated by gender, new/continuing, type of individual, location of individual, and type of technique/technology. Unit: Individual	Household producer survey	This will serve as reference for follow-up and end line. The techniques are those specified in questions 210, 211, and 213. The question includes also other techniques that farmers themselves qualified as new techniques too.	Q 210, 211 and 213 (for new techniques applied) Q12 (for gender) Question on country location	Number of farmers who applied new agricultural practices/per country/gender and type of practices Number of farmers who applied new agricultural practices • Per country: Cleaning of the plantation: Senegal (468), Gambia (74), Guinea Bissau (47) Grafting: Senegal (8), Gambia (0), Guinea Bissau (1) Pruning: Senegal (754), Gambia (115), Guinea Bissau (163) De-topping: Senegal (2), Gambia (44), Guinea Bissau (2) Other practices: Senegal (0), Gambia (4), Guinea Bissau (0) • By gender (all the three countries): Cleaning of the plantation: Men (482), Women (178) Grafting: Men (9), Women (0) Pruning: Men (911), Women (139) De-topping: Men (37), Women (11) Other practices: Men (15), Women (3) Method to add new trees to the plantation/by country Own seeds: Senegal (855), Gambia (135), Guinea Bissau (183) Grafted: Senegal (6), Gambia (1), Guinea Bissau (1) Nursery (purchased): Senegal (43), Gambia (2), Guinea Bissau (1) Nursery (gift): Senegal (84), Gambia (3), Guinea Bissau (35) Other sources: Senegal (21), Gambia (1), Guinea Bissau (5) Spacing: • Per country and gender At least one of the above regular spacing (15 x 15 m, 10 x 10 m, 5 x 5 m): Senegal (567), Gambia (78), Guinea Bissau (102) Men: Senegal (494), Gambia (69), Guinea Bissau (92) Women: Senegal (73), Gambia (9), Guinea Bissau (10) 15 x 15 meters: Senegal (154), Gambia (32), Guinea Bissau (63) 10 x 10 meters: Senegal (178), Gambia (27), Guinea Bissau (21) 5 x 5 meters: Senegal (447), Gambia (63), Guinea Bissau (97) Other spacing: Senegal (322), Gambia (50), Guinea Bissau (74)
Number of hectares of land under improved techniques or technologies as a result of USDA assistance (Standard #1)	Area of cashew land first brought under improved technique(s) or technology (ies) during the current reporting year. The number of hectares is linked to standard indicator #2 number of individuals applying improved techniques and technologies and standard indicator #7 associations/cooperatives/CBOs and MSMSEs applying improved technologies as determined by the Agriculture Team. Disaggregated by new/continuing, type of technique/technology, and location of land Unit: Hectare	Household producer survey	This serves as reference for follow up and end line. The question can be sharpen and divide in more specific questions also later when we know more about the techniques SFL will be using. There was no direct question in the survey asking for this. We used then the previous indicator on the number of individuals practicing new techniques and calculated the area of land dedicated to cashew production for that farmers	Question 192 about new techniques practiced and Q27 on total area dedicated to cashew plantation	Total area of land declared under improved new technique(s) = 575 hectares Senegal: 400 hectares Gambia: 75 hectares Guinea-Bissau: 100 hectares
Number of individuals who have applied improved farm management practices as result of USDA assistance (Standard #3)	Number of individuals who participate in structured training sessions conducted or managed by SFL, such as CMA management principles, marketing & branding, and buyer-seller relationship building and later newly applied the training, as determined by the Market Access Team. Individuals will only be counted once per fiscal year. Disaggregated by gender, new/continuing, type of individual, location of individual, and topic of training. Unit: Individual	Household producer survey	This serves as reference for follow up and end line. The question can be sharpen and divide in more specific questions also later when we know more about the techniques SFL will be using. There was no direct question in the survey asking for this. We used then the previous indicator on the number of individuals practicing new techniques and calculated the area of land dedicated to cashew production for that farmers	Question 192 about new techniques practiced (option management only) and Q27 on total area dedicated to cashew plantation	Number of individuals who have declared to practice improved farm management methods: Senegal: 89 farmers Gambia: 19 farmers Guinea-Bissau: 6 farmer

Number of private enterprises, producers' organizations, water users associations, women's groups, trade and business associations, and community based organizations (CBOs) that applied improved techniques and technologies as result of USDA assistance (Standard #7)	Number of groups (enterprises, associations, organizations, etc) who received training (Standard #16) and later newly applied the knowledge. This will be self-reported in an annual survey, with observation by the Agriculture Team. Groups will only be counted once per fiscal year. Disaggregated by new/continuing, type of group, location of group, and type of technique/technology. Unit: Group	Household producer survey	No results	No questions on this. Question 129/137 are about producers' organization membership but without reference on new or improved techniques	No results
Number of new buyer-seller relationships established as a result of USDA assistance (Custom indicator #11)	New relationships which includes sales of RCN, kernel, or cashew by product. The relationship is formalized by documented sale of product and can be local, regional, or international. Disaggregated by type of product, type of sale, and location of seller. Unit: Each sale is one unit	Enterprise survey	We aggregated the response for each categories of relationship and commodities	Formation of new buyer seller relationships for RCN, cashew kernel, roasted RCN, and cashew apple (Q 48, Q49, and Q51)	Number of new buyer seller relationships for raw cashew nuts during the past year (2017): Gambia: 4 Guinea-Bissau: 0 Senegal: 3 Number of new buyer seller relationships for cashew nut kernel during the past year (2017): Gambia: 3 Guinea-Bissau: 3 Senegal: 3 Number of new buyer seller relationships for roasted cashew nut during the past year (2017): Gambia: 3 Guinea-Bissau: 0 Senegal: 4 Number of new buyer seller relationships for cashew apple during the past year (2017): Gambia: 0 Guinea-Bissau: 4 Senegal: 1
Number of industry certifications achieved by processors as a result of USDA assistance (Custom indicator #12)	Certifications are conducted by outside groups such as USDA, ACA, or other organizations. (For example, ACA Quality seal, USDA organic, etc.) Certification must be complete to be counted, and must follow project training or facilitation which led to its achievement. Disaggregated by type of certification, type of enterprise, location of processor. Unit: Each certification	Enterprise survey	We aggregated the number of each categories of certifications that the respondents declared that they have	Industry certifications received by enterprises (Q102)	Number of African Cashew Allinace (ACA) certifications: Gambia: 1 Guinea-Bissau: 0 Senegal: 1 Number of Institut de Technologie Alimentaire (ITA) certifications: Gambia: 0 Guinea-Bissau: 0 Senegal: 3 Number of Hazard Analysis Critical Control Point (HACCP) certifications: Gambia: 3 Guinea-Bissau: 0 Senegal: 0 Number of United States Department of Agriculture (USDA) certifications: Gambia: 1 Guinea-Bissau: 0 Senegal: 1
[9] This values regard the farmers who produce only RCN and do not produce cashew apple juice. In fact, in the questionnaire we did not do the disaggregation of the declared revenue in terms of type of product because we thought we would be able to calculate those figures based on the declared price. How appears that the calculated figures are underestimated and to overcome the impossibility of disaggregating the declared figures, and in order to get at least the value of the total value of the declared revenue for RCN, we consider the total of the declared revenue of producers who do RCN only. In fact, those producers represent 83.15% of the producers surveyed in Guinea-Bissau, 92.7% in Gambia, and 88.5% in Senegal.					

Appendix DD: Evaluation Plan Table

	Key Evaluation Questions	Collection Method	Sources of Data	Instrument(s)	Indicators	Timeline
Relevance	A. To what extent were the objectives of the program appropriate for the cultural, economic, social and political context of the SeGaBi region?	* Document review * Key informant interviews (KII) *Focus group discussions/Group Interviews (FGDs)	*SFL project documents and staff *USDA project documents and staff *Cashew association documents *Cashew Farmers *Cash for Work Laborers * Government officials and community leaders *Financial Institutions *Cashew traders and exporters *Cashew related enterprises	*Cash for Work laborers FGDs *Cashew Farmers FGDs *Cashew kernel processor KII *Cashew-related enterprises KII *Financial institutions KII *Government officials and community leaders KII *USDA staff and SFL staff key informant KII *Cashew traders and exporters KII *Cashew related enterprises FGDs	*Judgment and rationale of alignment from community leaders and local government officials *Judgment and rationale of appropriateness from SLF and/or USDA staff *Judgment and rationale of Cashew Farmers, including women and youth, Cashew traders and exporters, and Cashew related enterprises *Judgment and rationale of staff at financial institutions *Judgment and rationale of Cash for Work Laborers *Comparison of project specifications to documented priorities of the government and various cashew associations documents	To be used in the MTE and FE
	B. How relevant was the program to national and regional strategic priorities for each country?	*Document review *Key informant interviews (KII)	*SFL project documents *USDA project documents and staff *SeGaBi national and regional policy documents *Financial institutions *Government officials and community leaders	*Financial institutions KII *Government officials and community leaders KII *USDA staff and SFL staff key informant KII	*Judgment and rationale of relevance from financial institutions *Judgment and rationale of relevance from governmental officials and community leaders *Judgment and rationale of relevance from community members *Judgment and rationale of relevance from government officials *Judgment and rationale of relevance from SLF and/or USDA staff	To be used in the MTE and FE
	C. To what extent was the program aligned with specific government policies?	*Document review *Key informant interviews (KII)	*SFL project documents *USDA project documents and staff *SeGaBi national and regional policy documents *Financial institutions *Government officials and community leaders	*Financial institutions KII *Government officials and community leaders KII *USDA staff and SFL staff key informant KII	*Judgment of alignment and rationale from community leaders *Judgment of alignment and rationale from government officials *Perceptions of alignment and rationale from SLF and/or USDA staff	To be used in the MTE and FE
	Key Evaluation Questions	Collection Method	Sources of Data	Instrument(s)	Indicators	Timeline
Effectiveness	A. To what extent were the program objectives and results achieved?					
	(1) infrastructure created?	*Document review *Key informant interviews (KII)	*SFL project documents and staff *USDA project documents and staff *Government officials and community leaders	*Government officials and community leaders KII *USDA staff and SFL staff key informant KII	*Judgment and rationale of infrastructure objectives and results achieved from SFL *Judgment and rationale of infrastructure objectives and results achieved from USDA *Judgment and rationale of infrastructure objectives and results achieved from governmental officials and community leaders *Infrastructure measurements compared to objectives	
	(2) access to a wide range of financial services increased for value chain actors?	*Document review *Survey *Key informant interviews (KII) *Focus group discussions/Group Interviews (FGDs)	*Cashew Farmers *Financial Institution staff and documents *Cashew traders and exporters *Cashew related enterprises *SFL project documents and staff	*Household Survey *Enterprise Survey *Cashew Farmers FGDs *Cashew kernel processor KII *Cashew-related enterprises KII *Financial institutions KII *Cashew traders and exporters KII *Cashew related enterprises FGDs *USDA staff and SFL staff key informant KII	*Judgment and rationale of increased access from cashew farmers *Judgment and rationale of increased access from financial institutions *Judgment and rationale of increased access from cashew processors, traders and exporters, and related enterprises *Judgment and rationale of increased access from SFL	
	(3) cashew farmers organized into marketing groups?	* Document review *Survey *Key informant interviews (KII) *Focus group discussions/Group Interviews (FGDs)	* Cashew Farmers *Cashew processors *Cashew traders and exporters *Cashew related enterprises *SFL project documents and staff	*Household Survey *Cashew Farmers FGDs *Cashew kernel processor KII *Cashew-related enterprises KII *Cashew traders and exporters KII *Cashew related enterprises FGDs *USDA staff and SFL staff key informant KII	*Number of marketing groups formed *Judgment and rationale of mechanisms and success of organization of market groups by cashew framers, processors, traders and exporters, and cashew related enterprises *Judgment and rationale of mechanisms and success of organization of market group by SFL staff	
	(4) cashew farmers trained on best practices?	* Document review *Survey * Key informant interviews (KII) *Focus group discussions/Group Interviews (FGDs)	*Cashew Farmers *Cashew processors *Cashew traders and exporters *Cashew related enterprises *SFL project documents and staff	*Household Survey *Cashew Farmers FGDs *Cashew kernel processor KII *Cashew-related enterprises KII *Cashew traders and exporters KII *Cashew related enterprises FGDs *USDA staff and SFL staff key informant KII	*The number of cashew farmers trained on best practices *Judgment and rationale of success of training from the cashew farmers *Judgment and rationale of success of training from the cashew processors, traders and exporters, and cashew related enterprises *Judgment and rationale of success of training from SFL staff	To be used in the MTE and FE

	B. To what extent were the different needs of women and youth participants considered during program implementation and how were the results different for these groups (if at all)?	* Document review *Survey * Key informant interviews (KII) *Focus group discussions/Group Interviews (FGDs)	* Cashew Farmers *Cash for Work Laborers *Government officials and Community leaders *Financial Institutions *Cashew traders and exporters *Cashew related enterprises *SFL project documents and staff *USDA project documents and staff	*Household Survey *Enterprise Survey *Cash for Work Laborers FGD *Cashew Farmers FGDs *Cashew kernel processor KII *Cashew-related enterprises KII *Financial institutions KII *Government officials and community leaders KII *USDA staff and SFL staff key informant KII *Cashew traders and exporters KII *Cashew related enterprises FGDs	*Reported different in results among households *Reported difference in results among enterprise *Judgment and rationale of cashew farmers related to the level of consideration and results *Judgment and rationale of Cash for Work Laborers related to the level of consideration and results *Judgment and rationale of processors, traders, exporters, and other SMEs related to the level of consideration and results *Judgment and rationale of financial institutions related to the level of consideration and results *Judgment and rationale of USDA and SFL staff related to the level of consideration and results	To be used in the MTE and FE
	C. What challenges were faced during implementation and how has the project responded to these challenges?	* Document review *Key informant interviews (KII) *Focus group discussions/Group Interviews (FGDs)	*SFL project documents and staff *USDA project documents and staff *Government officials and community leaders *Cashew Farmers *Cash for Work Laborers *Financial Institutions *Cashew traders and exporters *Cashew related enterprises	*Cash for Work Laborers FGD *Cashew Farmers FGDs *Cashew kernel processor KII *Cashew-related enterprises KII *Financial institutions KII *Government officials and community leaders KII *USDA staff and SFL staff key informant KII *Cashew traders and exporters KII *Cashew related enterprises FGDs	*Judgment and rationale related to challenges and responses from cash for work laborers *Judgment and rationale related to challenges and responses from community leaders and government officials *Judgment and rationale related to challenges and responses from cashew farmers, processors, trader exporters and other related enterprises *Judgment and rationale related to challenges and responses from USDA and SFL staff	To be used in the MTE and FE
Efficiency	Key Evaluation Questions A. Were the outputs and results achieved in a timely manner and within a reasonable period?	Collection Method * Document review *Key informant interviews (KII)	Sources of Data *SFL project documents, including available data gathered, and staff *USDA project documents and staff *Evaluators, baseline, MTE, FE *Government officials and community leaders	Instruments *SFL and USDA staff KII *Government officials and community leaders KII	Indicators *Judgment and rationale about timeliness from SFL and/or USDA *Judgment and rationale about timeliness from project's evaluators	To be used in the MTE and FE
	B. To what extent was collected data (quantitative and qualitative) used to make program decisions and course corrections as needed?	* Document review * Key informant interviews (KII)	*SFL project documents, including available data gathered, and staff *USDA project documents and staff *Evaluators, baseline, MTE, FE	*USDA staff and SFL staff key informant KII	*Judgment and rationale about usage from SFL and/or USDA *Judgment and rationale of project's evaluators	To be used in the MTE and FE
	Key Evaluation Questions A. What impact did the program have on the participants, positive and negative, and according to the anticipated objectives and results?	Collection Method * Document review *Surveys *Key informant interviews (KII) *Focus group discussions/Group Interviews (FGDs)	Sources of Data *SFL project documents and staff *USDA project documents and staff *Cashew association documents *Cashew Farmers *Cash for Work Laborers *Government officials and Community leaders *Financial Institutions *Cashew traders and exporters *Cashew related enterprises	Instruments *Household Survey *Enterprise Survey *Cash for Work laborers FGDs *Cashew Farmers FGDs *Cashew kernel processor KII *Cashew-related enterprises KII *Financial institutions KII *Government officials and community leaders KII *USDA staff and SFL staff key informant KII *Cashew traders and exporters KII *Cashew related enterprises FGDs	Indicators *Reported impacts among cashew farmer households *Reported impacts among cashew related enterprises *Judgment and rationale of impacts from Cash for Work laborers *Judgment and rationale of impacts from cashew farmers, including women and youth, cashew traders and exporters, processors and cashew related enterprises *Judgment and rationale of staff at financial institutions *Judgment and rationale of impacts from community leaders and local government officials *Judgment and rationale of impact from SFL and/or USDA staff	To be used in the MTE and FE
	B. Specifically, when cashew farmers gain new knowledge, skills, and access to market infrastructure, do they increase their substantive participation in the cashew value chain in terms of: (1) advocating for their interests?	* Document review *Key informant interviews (KII) *Focus group discussions/Group Interviews (FGDs)	*Cashew farmers *Cashew processors *Cashew traders and exporters *Cashew related enterprises *SFL project documents and staff *USDA project documents and staff	*Cashew Farmers FGDs *Cashew kernel processor KII *Cashew-related enterprises KII *Cashew traders and exporters KII *Cashew related enterprises FGDs *USDA staff and SFL staff key informant KII	*Judgment and rationale of increase of advocacy from cashew farmers, including women and youth, associations, cashew traders and exporters, processors and cashew related enterprises *Judgment and rationale of increase of advocacy from SFL and/or USDA staff	

	(2) increasing the volume of trade in cashews?	* Document review *Surveys *Key informant interviews (KII) *Focus group discussions/Group Interviews (FGDs)	*Cashew farmers *Cashew processors *Cashew traders and exporters *Cashew related enterprises *SFL project documents and staff *USDA project documents and staff	*Household Survey *Enterprise Survey *Cashew Farmers FGDs *Cashew kernel processor KII *Cashew-related enterprises KII *Cashew traders and exporters KII *Cashew related enterprises FGDs *USDA staff and SFL staff key informant KII	*Reported volume of trade among cashew farmer households *Reported value and volume among cashew related enterprises, such as processors and traders and exporters *Judgment and rationale of volume from cashew farmers, including women and youth, associations, cashew traders and exporters, processors and cashew related enterprises *Judgment and rationale of volume from SLF and/or USDA staff	
	(3) reinvesting in cashew productions?	* Document review *Surveys *Key informant interviews (KII) *Focus group discussions/Group Interviews (FGDs)	*Cashew farmers *Cashew processors *Cashew traders and exporters *Cashew related enterprises *SFL project documents and staff *USDA project documents and staff	*Household Survey *Enterprise Survey *Cashew Farmers FGDs *Cashew kernel processor KII *Cashew-related enterprises KII *Cashew traders and exporters KII *Cashew related enterprises FGDs *Financial institutions *USDA staff and SFL staff key informant KII?	*Reported reinvestment and value among cashew farmer households *Reported reinvestment and value among cashew related enterprises, such as processors and traders and exporters *Judgment and rationale of reinvestment and value from cashew farmers, including women and youth, associations, cashew traders and exporters, processors and cashew related enterprises *Judgment and rationale of reinvestment and value among financial institutions *Judgment and rationale of reinvestment and value from SLF and/or USDA staff	
	(4) creating new relationships?	* Document review *Surveys *Key informant interviews (KII) *Focus group discussions/Group Interviews (FGDs)	*Cashew farmers *Cashew processors *Cashew traders and exporters *Cashew related enterprises *SFL project documents and staff *USDA project documents and staff	*Household Survey *Enterprise Survey *Cashew Farmers FGDs *Cashew kernel processor KII *Cashew-related enterprises KII *Cashew traders and exporters KII *Cashew related enterprises FGDs *Financial institutions KII *USDA staff and SFL staff key informant KII	*Reported growth of number of relationships among cashew farmer households *Reported growth of number of relationships among cashew related enterprises, such as processors and traders and exporters *Reported growth of number of relationships by Financial institutions *Judgment and rationale of growth of number or relationships from cashew farmers, including women and youth, associations, cashew traders and exporters, processors and cashew related enterprises *Judgment and rationale of growth of number or relationships from financial institutions *Judgment and rationale of growth of number of relationships from SLF and/or USDA staff	
Impact	C. To what extent to feeder roads, when created in conjunction with producer organization, training, and development of buyer-seller relationships, impact the following?					
	(1) Cashew trade: value and volume of farmgate RCN sales? Value of sales by project beneficiaries (FFPr I:#13) Volume of commodities sold in metric tons by project beneficiaries (FFPr I:#14) Change in RCN farm-gate price received by project beneficiary (custom I:#3)	* Document review *Surveys *Key informant interviews (KII) *Focus group discussions/Group Interviews (FGDs)	*Cashew farmers *Cashew processors *Cashew traders and exporters *Cashew related enterprises *SFL project documents and staff	*Household Survey *Cashew Farmers FGDs *Cashew kernel processor KII *Cashew-related enterprises KII *Cashew traders and exporters KII *Cashew related enterprises FGDs *USDA staff and SFL staff key informant KII	*Reported value and volume among cashew farmer households *Reported value and volume among cashew related enterprises, such as processors and traders and exporters *Judgment and rationale of value and volume from cashew farmers, including women and youth, associations, cashew traders and exporters, processors and cashew related enterprises *Judgment and rationale of volume and value from SLF staff	To be used in the MTE and FE
	(2) Improved production practices: application of improved techniques and technologies? Number of individuals who have applied new techniques or technologies as a result of USDA assistance (FFPr I:#2) Number of hectares of land under improved techniques or technologies as a result of USDA assistance (FFPr I:#1) Number of individuals who have applied improved farm management practices as a result of USDA assistance (FFPr I:#3) Number of private enterprises, producers' organizations, water users associations, women's groups, trade and business association, and community-based organizations (CBOs) that applied improve techniques and technologies as a result of USDA assistance (FFPr I:#7)	* Document review *Surveys *Key informant interviews (KII) *Focus group discussions/Group Interviews (FGDs)	*Cashew farmers *Cashew associations *Cashew processors *Cashew traders and exporters *Cashew related enterprises *SFL project documents and staff *USDA project documents and staff *Relevant research	*Household Survey *Enterprise Survey *Cashew Farmers FGDs *Cashew kernel processor KII *Cashew-related enterprises KII *Cashew traders and exporters KII *Cashew related enterprises FGDs *USDA staff and SFL staff key informant KII	*Reported application among cashew farmer households, including application to amount of hectares *Reported application among cashew related enterprises *Judgment and rationale of application from cashew farmers, including women and youth, associations, cashew traders and exporters, processors and cashew related enterprises *Judgment and rationale of application from SLF and/or USDA staff	To be used in the MTE and FE
	D. How, if at all, did feeder and connector roads impact cashew framers and cashew-related businesses? To what extent does market infrastructure - including both roads and storage - increase the substantive participation of cashew farmers?	* Document review *Surveys *Key informant interviews (KII) *Focus group discussions/Group Interviews (FGDs)	*Cashew Farmers *Cashew association documents *Cashew processors *Cashew traders and exporters *Cashew related enterprises *SFL project documents and staff *USDA project documents and staff *Relevant research	*Household Survey *Enterprise Survey *Cashew Farmers FGDs *Cashew kernel processor KII *Cashew-related enterprises KII *Cashew traders and exporters KII *Cashew related enterprises FGDs *USDA staff and SFL staff key informant KII	*Reported impacts among cashew farmer households *Reported impacts among cashew related enterprises *Judgment and rationale of impacts from cashew farmers, including women and youth, cashew traders and exporters, processors and cashew related enterprises *Judgment and rationale of impact from SLF and/or USDA staff *Judgment and rationale from relevant research	To be used in the MTE and FE

	E. How can improved roads and post-harvest storage help in value creation to expand trade and markets? (Learning Agenda Question #4, edited).	* Document review *Surveys *Key informant interviews (KII) *Focus group discussions/Group Interviews (FGDs)	*Cashew farmers *Cashew association members *Cashew processors *Cashew traders and exporters *Cashew related enterprises *Financial institutions *SFL project documents and staff *USDA project documents and staff *Relevant research	*Household Survey *Enterprise Survey *Cashew Farmers FGDs *Cashew kernel processor KII *Cashew-related enterprises KII *Cashew traders and exporters KII *Cashew related enterprises FGDs *Financial Institutions *USDA staff and SFL staff key informant KII	*Judgment and rationale based on reported impact among cashew farmers *Judgment and rationale based on reported impact among cashew enterprises *Judgment and rationale of impact by cashew processors, traders and exporters, and related enterprises *Judgment and rationale of impact by financial institutions *Judgment and rationale of impact by USDA staff and SFL staff	To be used in the MTE and FE
	F. To what extent did the Financial Services component help small and medium sized producers, traders, and postharvest market actors (including processors), who frequently lack collateral, registration, and credit history to access loans or other financial instruments to effectively expand their businesses? (Learning Agenda Question #14, edited)	* Document review *Surveys *Key informant interviews (KII) *Focus group discussions/Group Interviews (FGDs)	*Cashew association members *Cashew processors *Cashew traders and exporters *Cashew related enterprises *Financial Institutions *SFL project documents and staff *USDA project documents and staff	*Enterprise Surveys *Cashew kernel processor KII *Cashew-related enterprises KII *Cashew traders and exporters KII *Cashew related enterprises FGDs *Financial institutions KII *USDA staff and SFL staff key informant KII	*Reported increase access among cashew enterprises *Judgment and rationale of increased access by cashew processors, traders and exporters, and related enterprises *Judgment and rationale of increased access by financial institutions *Judgment and rationale of increased access by USDA staff and SFL staff	To be used in the MTE and FE
	G. How did training, extension services, and demonstration farms affect the quality or quantity of cashew productions for smallholder farmers?	* Document review *Surveys *Key informant interviews (KII) *Focus group discussions/Group Interviews (FGDs)	*Cashew association documents *Cashew processors *Cashew traders and exporters *Cashew related enterprises *SFL project documents and staff *USDA project documents and staff	*Enterprise Surveys *Cashew kernel processor KII *Cashew-related enterprises KII *Cashew traders and exporters KII *Cashew related enterprises FGDs *USDA staff and SFL staff key informant KII	*Reported impact among cashew enterprises *Judgment and rationale of impact by cashew processors, traders and exporters, and related enterprises *Judgment and rationale of impact by USDA staff and SFL staff	To be used in the MTE and FE
	H. How did the LIFFT-Up data platform benefit and to what extent did it affect their [whose?] ability to engage in the regional cashew market?	* Document review *Surveys *Key informant interviews (KII) *Focus group discussions/Group Interviews (FGDs)	*Cashew association documents *Cashew processors *Cashew traders and exporters *Cashew related enterprises *SFL project documents and staff *USDA project documents and staff	*Enterprise Surveys *Cashew kernel processor KII *Cashew-related enterprises KII *Cashew traders and exporters KII *Cashew related enterprises FGDs *USDA staff and SFL staff key informant KII	*Reported impact among cashew enterprises *Judgment and rationale of impact by cashew processors, traders and exporters, and related enterprises *Judgment and rationale of impact by USDA staff and SFL staff	To be used in the MTE and FE
	I. What impact did the program have on the stabilization of the regional cashew market? What activities or components had a greater impact on market stabilization?	* Document review *Key informant interviews (KII) *Focus group discussions/Group Interviews (FGDs)	*Cashew association documents *Cashew processors *Cashew traders and exporters *Cashew related enterprises *Governmental officials and community leaders *Financial Institutions *SFL project documents and staff *USDA project documents and staff	*Cashew kernel processor KII *Cashew-related enterprises KII *Cashew traders and exporters KII *Cashew related enterprises FGDs *Government officials and community leaders KII *Financial institutions KII *USDA staff and SFL staff key informant KII	*Reported impact among cashew enterprises *Judgment and rationale of impact by cashew processors, traders and exporters, and related enterprises *Judgment and rationale of impact by government officials and community leaders *Judgment and rationale of impact by financial institutions *Judgment and rationale of increased access by USDA staff and SFL staff	To be used in the MTE and FE
Key Evaluation Question	Sub Evaluation Questions	Collection Method	Sources of Data	Instruments	Indicators	Timeline
	A. What is the probability that the intervention will have a lasting impact in households and Small and Medium Sized Enterprises (SMEs)? Why? And what evidence supports this?	*Document review *Survey *Key informant interviews (KII) *Focus group discussions/Group Interviews (FGDs)	*SFL program documents, including the MTE documents *SLF US and Senegal project staff *USDA project staff *Evaluator who completed the MTE	*Household Survey *Enterprise Survey *Cashew Farmers FGDs *Cashew kernel Processors KII *Cashew-related enterprises KII *Cashew trader and exporters KII *Cashew related enterprise FGDs	*Reported perception of likelihood of lasting impact among households *Reported perception of likelihood of lasting impact among SMEs. *Judgment and rationale of sustainability among cashew farmers *Judgment and rationale of sustainability of processors, traders, exporters, and other SMEs *Judgment and rationale of sustainability of road users	To be used in the MTE and FE
	B. What is the probability of continued: (1) ongoing road maintenance?	*Document review *Survey *Key informant interviews (KII) *Focus group discussions/Group Interviews (FGDs)	*SFL project documents and staff *USDA project documents and staff *Cashew Farmers *Cash for Work Laborers *Government officials and Community leaders	*Household Survey *Cash for Work laborers FGDs tool *Cashew Farmers FGDs tool *Government officials and community leaders KII *USDA staff and SFL staff key informant KII	*Reported perception of likelihood of lasting impact among households *Judgment and rationale of likelihood of lasting impact among Cash for Work laborers *Judgment and rationale of sustainability among cashew farmers *Judgment and rationale of sustainability among government official and community leaders *Judgment and rationale of USDA staff and SFL staff	To be used in the MTE and FE

Sustainability <i>How likely are benefits associated with the project to continue beyond the life of the project?</i> <i>To what extent has the project planned for the continuation of project activities, developed local ownership for the project, and developed sustainable partnerships?</i>	(2) access to finances?	* Document review *Survey *Key informant interviews (KII) *Focus group discussions/Group Interviews (FGDs)	* Cashew Farmers *Financial Institutions *Government officials and Community leaders *SFL project documents and staff *USDA project documents and staff	*Household Survey *Enterprise Survey *Cashew Farmers FGDs tool *Financial Institutions KII *Government officials and community leaders KII *USDA staff and SFL staff key informant KII	*Reported perception of likelihood of lasting impact among households *Judgment and rationale of sustainability among cashew farmers *Judgment and rationale of sustainability among cashew enterprises *Judgment and rationale of likelihood of lasting impact among financial institutions *Judgment and rationale of sustainability among government official and community leaders *Judgment and rationale of USDA staff and SFL staff	To be used in the MTE and FE
	(3) participation in Cashew Marketing Associations (CMA)?	* Document review *Survey *Key informant interviews (KII) *Focus group discussions/Group Interviews (FGDs)	*Cashew Farmers *Government officials and community leaders *Cashew traders and exporters *Cashew processors and related enterprises *SFL project documents and staff *USDA project documents and staff	*Household Survey *Cashew Farmers FGDs tool *Cashew kernel processor KII *Cashew-related enterprises KII *Cashew traders and exporters KII *Cashew related enterprises FGDs *Government officials and community leaders KII *USDA staff and SFL staff key informant KII	*Reported perception of likelihood of lasting impact among households *Judgment and rationale of sustainability among cashew farmers *Judgment and rationale of likelihood of lasting impact among cashew processors, traders and exporters, and related enterprises *Judgment and rationale of sustainability among government official and community leaders *Judgment and rationale of USDA staff and SFL staff	To be used in the MTE and FE
	C. What are the long-term outcomes, both direct and indirect, of interventions related to roads and other key infrastructure components in creating strong market systems? (Learning Agenda Question #6)	* Document review *Key informant interviews (KII) *Focus group discussions/Group Interviews (FGDs)	*Research related to this question *Cashew Farmers *Transporters? *Government officials and community leaders *Cashew traders and exporters *Cashew processors and related enterprises *SFL project documents and staff *USDA project documents and staff	*Household Survey *Cashew Farmers FGDs tool *Cashew kernel processor KII *Cashew-related enterprises KII *Cashew traders and exporters KII *Cashew related enterprises FGDs *Government officials and community leaders KII *USDA staff and SFL staff key informant KII	*Reported outcomes based on research *Reported outcomes among households *Reported outcomes and rationale among enterprises including processors, traders and exporters, and cashew related enterprises *Reported outcomes and rationale among cashew framers *Reported outcomes and rationale related to government official and community leaders *Reported outcomes and rationale of USDA staff and SFL staff	
	D. To what extent has the lending mechanism become self-sufficient and therefore sustainable?	* Document review *Key informant interviews (KII) *Focus group discussions/Group Interviews (FGDs)	*Cashew Farmers *Government officials and community leaders *Cashew traders and exporters *Cashew processors and related enterprises *Financial institutions *SFL project documents and staff *USDA project documents and staff	* Cashew Farmers FGDs tool *Cashew kernel processor KII *Cashew-related enterprises KII *Cashew traders and exporters KII *Cashew related enterprises FGDs *Government officials and community leaders KII *Financial institutions KII *USDA staff and SFL staff key informant KII	*Judgment and rationale of sustainability among cashew farmers *Judgment and rationale of likelihood of lasting impact among cashew processors, traders and exporters, and related enterprises *Judgment and rationale of sustainability among government official and community leaders *Judgment and rationale of USDA staff and SFL staff	To be used in the MTE and FE

APPENDIX EE: QED RESEARCH QUESTION, AND SUBSEQUENT ECONOMETRIC MODEL

1. QED Research Question:

The research question to which the QED as part of this evaluation will answer is the following: To what extent can rehabilitated feeder roads increase the production value and balance the bargaining power between stakeholders of the cashew market?

The QED research question seeks to measure the contribution of each component of the LIFFT-Cashew program, specifically the rehabilitated feeder roads as the principal intervention on the development of the cashew market. Such a development of the market is expected to benefit to all the stakeholders though the cashew farmers should be the first concerned. In fact, farmers are expected to increase the quality of their production through the adoption of new farming practices, adoption of new techniques, access to markets and better organization between them. The consequence would be a better bargaining power for the rebalance and the improvement of the cashew market functioning benefiting for all of them. To answer that question, an econometric model that will provide the effect of the access to the rehabilitated roads as the main variable of interest, but also the effect of the other components of the LIFFT intervention is proposed below.

2. Econometric Model:

We expect the LIFFT intervention to influence the bargaining power of the farmers and rebalance the functioning of the market in such a way that all the stakeholders, more specifically the producers will see the value of their sales increased. We propose therefore a model that estimates the revenue from the sales that farmers will record during and after the intervention:

$$Y^i(RS) = a_1T_1^i + a_2T_2^i + a_3T_3^i + a_4T_4^i + bXi + e, \quad i = 1, N :$$

- The dependent variable in the equation ($Y^i(RS)$) is the average revenue from the sales of the cashew products.
- The variables of interest (T) is set of treatment variable that define the type of treatment a respondent (i) has received, namely which of the different components of the intervention he benefits from. The treatment will take the value 1 if the producer actually benefited from the treatment and 0 otherwise. However, there will be a particular focus on the component 1 (Infrastructure), namely the rehabilitated roads more as the quasi-experimental design was prepared on the basis of that specific component of the LIFFT intervention.
- In addition, a range of control variables (X) will be included in the analysis. These will be selected based on key determinants and characteristics of the roads (main road or not, length of the road, number of villages crossed by the road), socio-economic variables and variables related to the agricultural activity. Variables related to the political prices of the three governments will also be considered in the set of control variables. For example, the government may take different decision of regulation of conditions of sales each year between baseline, midline and endline. In discussion with specialists of the value chain in SFL, key control variables that could influence the global market trends will be considered as part of the control variables.