



*Central Agricultural Research Institute
Suakoko District, Bong County
Republic of Liberia*

*Report Covering
CARI Client Satisfaction Survey: A Pilot Study of Bong County*

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Foreword



The Central Agricultural Research Institute (CARI) remains committed to strengthening agricultural research, innovation, and service delivery for the benefit of farmers, policymakers, and development partners across Liberia. As part of our ongoing efforts to enhance institutional performance and align with the Service Delivery Charter (SDC) and the Performance Management Compliance System (PMCS), this research initiative “*Enhancing CARI Service Delivery through Priority Service Mapping, Feedback Mechanisms, and Client Satisfaction in Bong County*”, represents a critical step toward building a more responsive, transparent, and client-centered institution.

In recent years, the demand for reliable, timely, and high-quality agricultural services has grown significantly. Farmers, cooperatives, government agencies, and development partners increasingly require research outputs, technical guidance, and interventions that meet evolving agricultural challenges. To fulfill this mandate, CARI needs to understand stakeholder expectations, identify service gaps, and adopt evidence-based strategies for continuous improvement.

This report presents a comprehensive approach to strengthening service delivery through systematic mapping of priority services, deployment of structured feedback tools, and implementation of client satisfaction. The use of mixed research methods ensures that the insights captured reflect the diverse perspectives of farmers, cooperatives, policymakers, donors, and other beneficiaries within Liberia. Furthermore, the inclusion of staff training on feedback collection and analysis underscores CARI’s commitment to institutional capacity-building and sustainable service delivery reforms.

The initiative also reinforces our dedication to transparency and accountability. Through thorough service delivery performance analysis and the establishment of functioning feedback mechanisms, CARI seeks to enhance stakeholder trust and uphold its mandate as Liberia’s premier agricultural research institution. The findings and recommendations emerging guides strategic decisions, inform policy direction, and support the modernization of agricultural service systems within the country.

We extend our appreciation to all stakeholders, farmers’ groups, the Ministry of Agriculture, donor partners, researchers, and staff who contributed their time, perspectives, and expertise to this process. Their engagement has enriched the quality of this research and strengthened its potential impact. As we work collectively toward improving agricultural productivity and service excellence, this report serves as both a roadmap and a commitment. CARI will continue to build upon these efforts to ensure that our services remain accessible, client-focused, and aligned with national development priorities.

A handwritten signature in blue ink that reads "Dr. Arthur Bob Karnuah". The signature is written in a cursive style.



Dr. Arthur Bob Karnuah
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Preface

The Central Agricultural Research Institute (CARI) continues to play an essential role in advancing agricultural innovation and supporting evidence-based decision-making in Liberia. As the country seeks to strengthen institutional accountability and improve public service systems, it has become increasingly important for research institutions to adopt structured mechanisms that ensure responsiveness to clients and adherence to national service standards.

This report, “Enhancing CARI Service Delivery through Priority Service Mapping, Feedback Mechanisms, and Client Satisfaction in Bong County,” emerges from CARI’s commitment to aligning its institutional functions with the Performance Management Compliance System (PMCS) and the Service Delivery Charter (SDC). The study was conceived to address existing gaps in documentation, stakeholder feedback, staff capacity, and performance monitoring, areas that are critical for improving service quality and meeting user expectations.

The preface outlines the purpose and scope of the initiative, which integrates priority service mapping; employing a mixed-methods research design, the study engaged farmers, cooperatives, policymakers, donors, and other stakeholders who interact directly with CARI’s services. Their inputs have enriched the analysis and provided a realistic picture of the challenges, strengths, and opportunities within CARI’s service delivery system.

A central feature of this work is its emphasis on evidence-based management. Through quantitative assessment, qualitative inquiry, and the development of clear satisfaction indicators, the study provides actionable insights that will support more efficient service processes, informed program adjustments, and improved institutional accountability. The integration of frequent monitoring and reporting further demonstrates CARI’s intention to institutionalize continuous improvement as a core operational practice.

This report therefore serves not only as a research output but also as a strategic instrument for transforming service delivery within CARI. It highlights the Institute’s forward-looking approach and dedication to strengthening relationships with farmers, research partners, government entities, and development actors. By implementing the recommendations of this study, CARI aspires to elevate service standards, enhance user satisfaction, and reinforce its role as Liberia’s national leader in agricultural research and extension support.

The Department of Socioeconomics and Applied Statistics extends appreciation to all individuals and organizations that contributed to this effort. Their cooperation, insights, and willingness to participate made this study possible and continue to drive CARI’s mission toward excellence in agricultural research and service delivery.

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1.0. Executive Summary

This report presents the outcomes of the initiative titled “*Enhancing CARI Service Delivery through Priority Service Mapping, Feedback Mechanisms, and Client Satisfaction Surveys in Bong County.*” The study was implemented by the Department of Socioeconomics and Applied Statistics as part of CARI’s commitment to strengthening institutional performance in line with the Government of Liberia’s Service Delivery Charter (SDC) and the Performance Management Compliance System (PMCS).

The assessment was driven by the need to address persistent challenges within CARI’s service system, including inadequate documentation of priority services, limited client feedback channels, insufficient staff capacity, and weak monitoring mechanisms. Through a mixed-methods approach, the study engaged farmers, cooperatives, policymakers, donors, and other stakeholders who directly interact with CARI’s services.

Quantitative data were analyzed using descriptive statistics and satisfaction indices, while qualitative data were examined thematically to extract client perceptions, expectations, and recommendations.

Major findings highlight gaps in service timeliness, accessibility, responsiveness, and feedback handling. However, they also reveal strong stakeholder interest in engaging with CARI and high expectations for improved research outputs, training, and extension support.

The report concludes with actionable recommendations aimed at improving responsiveness, strengthening feedback systems, and aligning CARI’s service delivery with national standards. Implementation of these recommendations will position CARI to provide more effective, transparent, and client-centered services that supports the ARREST Agenda for inclusive Development.

2.0. Background

The Central Agricultural Research Institute (CARI) plays a pivotal role in Liberia’s agricultural transformation efforts. As the national hub for agricultural research and technology generation, CARI works to improve productivity, resilience, and sustainability across farming systems. Its mandate requires strong engagement with farmers, cooperatives, policymakers, researchers, and development partners. Despite its critical role, challenges persist in the alignment of CARI’s service delivery practices with stakeholder expectations and national service standards. These challenges constrain institutional effectiveness and hinder CARI’s ability to demonstrate accountability, transparency, and client focus as outlined in the Service Delivery Charter.

Recognizing these gaps, CARI initiated this research effort to establish a structured and evidence-based framework for improving service systems. The report focuses on strengthening service delivery mechanisms through mapping, feedback collection, satisfaction assessment, and performance reporting. This initiative was timely, occurring at a period when national and international stakeholders increasingly demand measurable results, improved service quality, and enhanced public engagement in agricultural research and extension.

3.0. Objective:

The overall objective of this report is to enhance service delivery at CARI by deploying feedback mechanisms and making evidence-based decisions to improve service delivery. It aims to map and document priority services aligned with the Service Delivery Charter and the ARREST Agenda, develop and deploy client feedback mechanisms that ensure continuous monitoring of service quality, and integrate findings into CARI service delivery adjustments.

4.0. Methodology

The methodology adopted for the development of this CARI Service Delivery Report was designed to generate clear, evidence-based insights into how clients access and experience the range of services offered by the Central Agricultural Research Institute (CARI) in Bong County. A mixed-methods approach was used, combining desk review, stakeholder engagement, service mapping exercises, and client feedback collection. This approach ensured that the findings reflect not only institutional processes but also the lived experiences of farmers, partners, and community stakeholders who rely on CARI's services.

The process began with a comprehensive desk review of internal documents, including service delivery guidelines, departmental activity, and ongoing project frameworks within the Department of Socioeconomics and Applied Statistics. This review provided a foundational understanding of CARI's current service offerings, and priority areas for improvement.

Following the desk review, a structured Priority Service Mapping exercise was conducted. This involved identifying the core services provided by CARI, such as research dissemination, training, seed production, laboratory diagnostics, extension support, and technology transfer and analyzing how these services flow from the Institute to its intended beneficiaries.

To capture client perspectives, a Client Satisfaction Feedback mechanism was developed and implemented. This included both qualitative and quantitative tools such as structured questionnaires, face-to-face interviews, and brief feedback conversations with farmers, partner institutions, trainees, and visitors to the Institute. Respondents were purposefully selected to ensure

that the insights reflected experiences across different service categories and user groups. Special attention was given to understanding client expectations, perceived quality of service delivery, responsiveness of CARI staff, and the accessibility of services.

Additionally, engagement sessions were held with key external stakeholders, including local extension agents, partner NGOs, private-sector actors, and community groups. These consultations helped validate the experiences reported by clients and provided independent observations on CARI's service performance, visibility, and impact at the local level.

The final stage involved synthesizing the findings across all sources. Data were analyzed for recurring themes, service gaps, and performance strengths. Quantitative responses from the client satisfaction surveys were summarized to provide measurable indicators of service quality, while qualitative insights from interviews and consultations were interpreted to give depth and context to the results.

Through this blended and participatory approach, the methodology ensured that the report reflects an accurate, holistic, and actionable understanding of CARI's service delivery performance, laying the foundation for practical recommendations that can enhance client satisfaction and institutional effectiveness moving forward.

5.0. Characteristics of Farmers

5.1. Gender Dimensions of Farmers Across Selected Districts

The gender distribution of farmers across the twelve districts reveals important insights into the participation of men and women in agricultural activities within the study area. Overall, the data show that a total of 1,091 farmers were recorded, of which 484 (44.36%) were female and 607 (55.64%) were male. This indicates that while both genders are significantly represented, men constitute a slightly higher proportion of the farming population.

A district-by-district analysis shows notable variation in gender participation. In Jorquelleh District, female farmers represent the majority, accounting for 55.78% compared to 44.22% males. A similar female-dominant pattern is observed in Suakoko (51.35% female) and Fuamah (52.73% female), suggesting that women in these districts play a particularly strong role in agricultural production and related activities.

In contrast, male dominance is more pronounced in several districts. Yellequelleh, Zota, and Boisen districts show male proportions of 58.54%, 57.78%, and 67.5% respectively. The pattern continues in Kokoyah (63.33% male) and Kpaai, where male farmers represent 60.13%. These figures indicate that men take on a larger share of farming responsibilities in these areas, which

may be influenced by household dynamics, access to land, or cultural practices around farming labor.

Some districts exhibit even stronger male dominance. Sanoyea District stands out with the lowest female participation at 27.42%, meaning that nearly three-quarters (75.58%) of the farmers are men. Similarly, Tukpahblee shows a significant male majority, with 60% male farmers compared to 40% female.

Districts such as Panta and Salala show a more balanced distribution, with females representing 44.44% and 46.84% respectively. This suggests a relatively equitable gender involvement in agriculture, though men still maintain a slight majority.

Overall, the table highlights a mixed gender landscape: while some districts demonstrate strong female involvement in farming, the general pattern across the county shows that men constitute a larger share of the agricultural workforce. These variations underscore the importance of district-level analysis when designing agricultural programs, ensuring that interventions are tailored to the specific gender dynamics of each locality. Understanding these patterns can help CARI and development partners address gender gaps, support women farmers more effectively, and promote inclusive agricultural development across the region.

Gender Dimension of Farmers

<i>Name of District</i>	<i>Female</i>	<i>Male</i>	<i>Total</i>
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	#	%	#	%	
Jorquelleh	82	55.78	65	44.22	147
Suakoko	76	51.35	72	48.65	148
Yellequelleh	34	41.46	48	58.54	82
Zota	38	42.22	52	57.78	90
Boisen	13	32.5	27	67.5	40
Fuamah	29	52.73	26	47.27	55
Kokoyah	11	36.67	19	63.33	30
Kpaai	63	39.87	95	60.13	158
Panta	40	44.44	50	55.56	90
Salala	37	46.84	42	53.16	79
Sanoyea	17	27.42	45	75.58	62
Tukpahblee	44	40	66	60	110
Total	484	44.36	607	55.64	1,091

5.2. Discussion of Education Attainment of Respondents Across Districts

The education profile of respondents across Bong County provides important insight into the human capital base that underpins agricultural service uptake, technology adoption, and overall engagement with CARI’s service delivery initiatives. The data reflect diverse educational backgrounds, yet a common trend of limited formal education persists across nearly all districts. A significant proportion of respondents have no formal education, particularly in districts such as Kpaai (68.35%), Suakoko (56.76%), and Yellequelleh (53.66%). These high percentages demonstrate that illiteracy remains a major constraint within farming communities. Farmers with no formal education may rely primarily on experiential knowledge, informal learning, and traditional production systems. This reality has service delivery implications: extension messages must be carefully simplified, training must incorporate demonstrations rather than written materials, and service points must emphasize face-to-face communication.

Across the county, primary education serves as the second-most common education level. Districts such as Salala (44.3%), Zota (43.33%), and Panta (35.56%) demonstrate relatively stronger primary-level attainment. While this suggests some degree of foundational literacy, it remains insufficient for advanced technical agricultural training. Even with primary education, farmers may face challenges in interpreting manuals, record-keeping, or understanding detailed agronomic

instructions. This reinforces the need for CARI to continue using inclusive training methodologies that accommodate semi-literate farmers.

In contrast, secondary education shows considerable variation across districts. Panta (30%), Tukpahlee (28.18%), and Boisen (25%) stand out as districts with a comparatively higher share of secondary-level respondents. This subset of farmers is more likely to adopt improved agricultural technologies, participate actively in trainings, and understand research outputs when effectively communicated. These districts offer opportunities for piloting advanced training modules or community-based demonstration plots.

The proportion of respondents with university education is extremely small across all districts, generally ranging between 0% and 4%. These individuals are likely community leaders, cooperative managers, extension agents, or youth with formal agricultural exposure. Although the numbers are low, their presence can be leveraged to promote peer learning, coach farmer groups, and facilitate data collection for feedback mechanisms.

Similarly, vocational training is limited in most districts. Only a handful of respondents in Jorquelleh, Salala, and Tukpahlee reported having undergone vocational agricultural or technical training. Vocational programs have the potential to strengthen farmers' skills in areas such as agribusiness, machinery operation, value addition, and cooperative management.

Taken together, the education profile highlights the need for CARI to design service delivery in a manner that is inclusive, practical, visual, and easily understood. Low literacy levels demand that training materials prioritize illustrations, demonstrations, farmer field schools, and oral communication. The mixed education levels also underscore the importance of targeted capacity development, ensuring that no farmer group is left behind due to educational barriers.

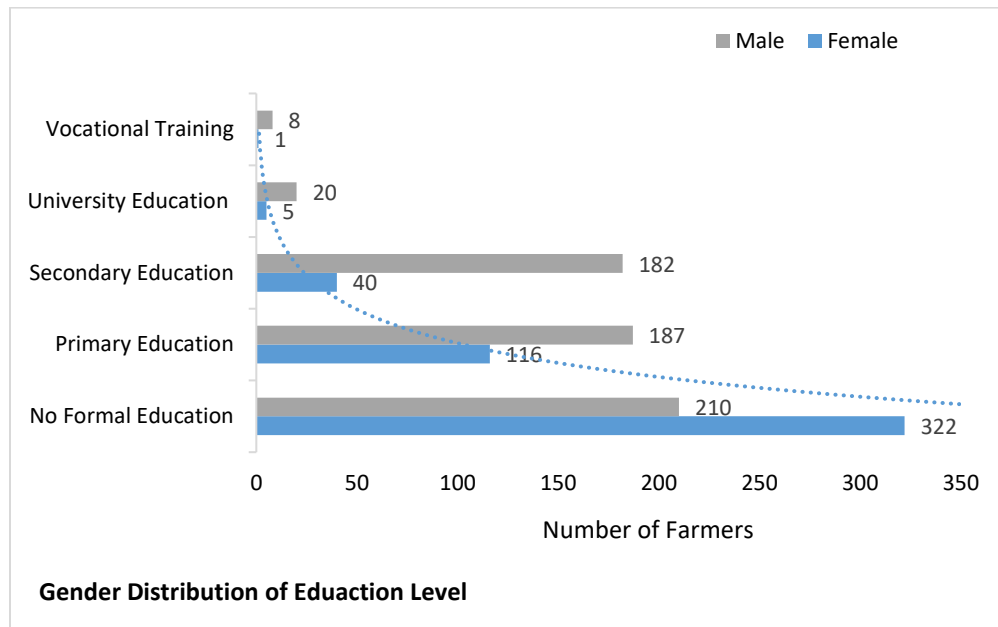
Education Attainment of Respondents per District

<i>Name of District</i>	<i>No Former Education</i>	<i>Primary Secondary</i>	<i>Secondary</i>	<i>University</i>	<i>Vocational Training</i>
Jorquelleh	48.98	34.01	12.24	3.4	1.36
Suakoko	56.76	18.92	22.3	1.35	0.68
Yellequelleh	53.66	25.61	19.51	0	1.22
Zota	37.78	43.33	15.56	3.33	0
Boisen	45	30	25	0	0
Fuamah	50.91	21.82	23.64	3.64	0
Kokoyah	43.33	36.67	20	0	0
Kpaai	68.35	12.03	1.9	1.9	0
Panta	28.89	35.56	30	4.44	1.11
Salala	32.91	44.3	18.99	1.27	2.53
Sanoyea	40.32	40.32	17.74	1.61	0
Tukpahblee	49.09	17.27	28.18	3.64	1.82

5.3. Gender Dimension of Education Level

There is a clear gender gap in the education levels of farmers, with women consistently having lower educational attainment than men at every level. A large proportion of female farmers fall under “No Formal Education,” with 322 women compared to 210 men, indicating a substantial literacy challenge among women in agricultural communities. This gap continues across all other education categories: fewer women reach primary and secondary school, and the disparity becomes even more pronounced at higher levels of education, such as university and vocational training. Only 5 women hold university degrees compared to 20 men, and just 1 woman has vocational training compared to 8 men. This distribution demonstrates that women face greater barriers to education, limiting their access to advanced agricultural knowledge, training, and opportunities. This gendered educational imbalance has direct implications for CARI’s service delivery initiatives. Lower education levels among female farmers can reduce their ability to fully understand and apply research outputs, technical information, and improved agricultural technologies provided by CARI. It also affects their participation in training, potentially leading to underrepresentation of women’s needs in institutional planning. To ensure equitable service delivery, CARI must tailor its approaches, such as using more visual learning tools, simplified training materials, demonstrations, and targeted outreach to accommodate women with limited

literacy. Additionally, CARI should integrate gender-responsive strategies, including specific capacity-building interventions for women, to close the education gap and enhance the effectiveness of agricultural services across Liberia.



5.4. Age Distribution of Farmers and Linkage to CARI Service Delivery under PMCS

The age distribution of farmers reveals that Bong County’s agricultural workforce is dominated by individuals in their economically active years. Farmers between 26–35 years represent the largest group, accounting for 50.78% of all respondents, followed by those aged 46–55 years, who make up 29.51%. A smaller proportion falls within the 56–65 age group (13.47%), while the youngest farmers, aged 17–25, constitute only 6.23% of the sample. The calculated average age of 43 years suggests that the farming population is largely middle-aged, with relatively low youth participation.

This age pattern has several implications for CARI’s service delivery under the Performance Management Compliance System (PMCS). First, the dominance of mature and middle-aged farmers indicates that service delivery efforts, such as training, technology dissemination, and research uptake, must consider the learning preferences and capacities of an older farming population. Farmers in this age bracket are often experienced but may be slower in adopting new agricultural innovations without practical demonstrations and hands-on support. Moreover, the low participation of youth signifies a potential long-term risk to agricultural sustainability. Under PMCS service standards, CARI is mandated to promote inclusive and responsive service delivery;

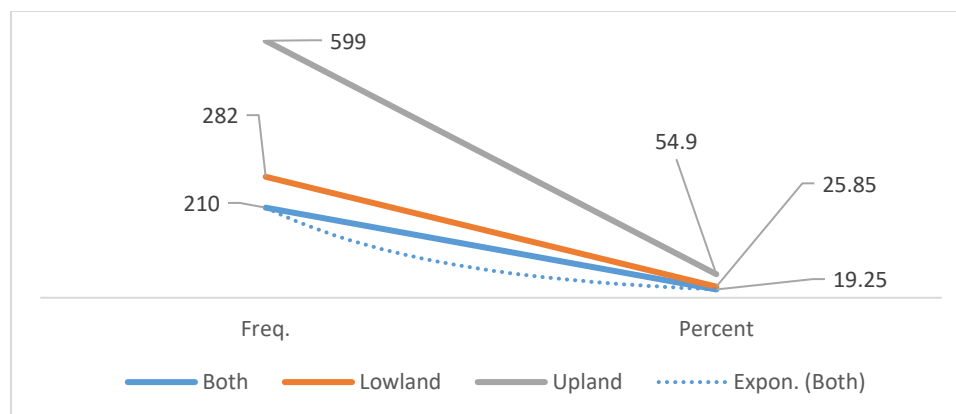
therefore, targeted youth engagement strategies such as digital agriculture training, youth-specific demonstration plots, and agribusiness incubation programs become essential.

The significant share of farmers aged 46 and above underscores the need to simplify extension messages, develop age-friendly training tools, and strengthen follow-up support to ensure consistent application of research outputs. By integrating these age-related insights into its service delivery framework, CARI can better align its interventions with client needs, enhance institutional accountability, and ensure compliance with PMCS guidelines on client-centered service delivery.

5.5. Age

Age of the farmers			
	Frequency	Percentage	
17-25 Years	60	6.23	
26-35 Years	554	50.78	Average age of 43 years
46-55 Years	322	29.51	
56-65 Years	147	13.47	

6.0. Rice Ecology



7.0. Rice Ecology by Gender

The analysis of rice ecology in Bong County reveals important gender dynamics and district-level variations that have significant implications for CARI’s Priority Mapping and Client Segmentation (PMCS) approach to service delivery. Overall, women constitute a slightly larger proportion of the rice farming population, accounting for 55.64% of all rice farmers surveyed, compared to 44.36% men. Despite this relatively balanced distribution, women are disproportionately represented in upland rice cultivation, an environment that is more labor-intensive, less productive, and more vulnerable to climate variability. The data show that 67.62% of upland rice farmers are women, compared to only 32.38% men, indicating that women continue to rely heavily on upland fields for their livelihoods. This reliance on upland farming underscores the urgent need for targeted support to improve soil fertility, promote climate-smart agricultural practices, and ensure equitable access to upland-adapted seeds and technologies.

In lowland rice production, the gender distribution is more balanced, with women representing 52.84% and men 47.16%. This moderate female dominance suggests growing female participation in lowland systems, which are often more productive and have greater potential for intensification. Additionally, among farmers operating in both upland and lowland ecologies, women again constitute the majority with 52.75%, which highlights their substantial engagement across diverse production environments. These gendered patterns reinforce the need for CARI to design gender-responsive service delivery models under the PMCS framework, ensuring that women who are key actors in rice production receive equitable access to improved technologies, training, and resources suited to the ecological zones where they operate.

7.1. Rice Ecology by Gender

Major Rice Ecology	Male		Female	
	%	#	%	#
Upland Land Rice	32.38	68	67.62	142
Lowland Rice	47.16	133	52.84	149
Both	47.25	283	52.75	316
Total	44.36	484	55.64	607

7.2. Rice Ecology by Districts

District-level distribution of rice ecologies further adds complexity to the service delivery landscape. Upland rice farming dominates a majority of districts, with particularly high concentrations in Yellequelleh (93.9%), Sanoyea (85.48%), Kpaai (72.15%), and Jorquelleh (75.51%). These upland-dominated districts require specific interventions such as soil fertility enhancement, climate-resilient cropping practices, erosion control, and the dissemination of upland rice varieties adapted to environmental stress. In contrast, other districts show higher engagement in lowland production, including Panta, Salala, and Suakoko, where swamp rice cultivation opportunities can be leveraged to boost productivity. These districts are ideal targets for lowland intensification programs involving swamp rehabilitation, water management systems, and improved lowland varieties.

A third group of districts, such as Tukpahlee, Kokoyah, and Zota, demonstrates significant involvement in both upland and lowland ecosystems. These mixed-ecology districts require integrated extension packages that support flexible rice production strategies, allowing farmers to optimize both ecological conditions depending on seasonal and environmental factors. This district-level ecological diversity aligns strongly with the PMCS approach, which emphasizes delivering tailored services to clients based on their unique production contexts.

Overall, the analysis of rice ecology across Bong County demonstrates that effective service delivery must be grounded in both gender considerations and ecological realities. Women's heavy involvement in upland farming, district-level differences in ecology, and the diverse production roles played by farmers all highlight the need for CARI to adopt targeted, evidence-based, and inclusive strategies. By aligning extension services, technology dissemination, and capacity-building interventions with these ecological and demographic patterns, CARI can significantly strengthen its impact, ensuring that farmers receive services that are relevant, responsive, and capable of improving productivity across Liberia's rice sector.

7.3. Rice Ecology by Districts

	<i>Both</i>		<i>Lowland</i>		<i>Upland</i>		<i>Total</i>
	<i>#</i>	<i>%</i>	<i>#</i>	<i>%</i>	<i>#</i>	<i>%</i>	<i>#</i>
<i>Jorquelleh District</i>	5	3.4	31	21.09	111	75.51	147
<i>Suakoko District</i>	15	10.14	48	32.43	85	57.43	148
<i>Yellequelleh Distr..</i>	0	0	5	6.1	77	93.9	82
<i>Zota District</i>	31	34.44	23	25.56	36	40	90
<i>Boisen District</i>	19	47.5	14	35	7	17.5	40
<i>Fuamah District</i>	11	20	13	23.64	31	56.36	55
<i>Kokoyah District</i>	18	60	8	26.67	4	13.33	30
<i>Kpaai District</i>	26	16.46	18	11.39	114	72.15	158
<i>Panta District</i>	16	17.78	32	46.67	42	35.56	90
<i>Salala District</i>	3	3.8	33	54.43	43	41.77	79
<i>Sanoyea District</i>	5	8.06	4	6.45	53	85.48	62
<i>Tukpahblee District</i>	61	55.45	33	30	16	14.55	110
<i>Total</i>	<i>210</i>	<i>19.25</i>	<i>282</i>	<i>25.85</i>	<i>599</i>	<i>54.9</i>	<i>1091</i>

8.0. CARI Services Used by farmers

The data on CARI services used by farmers provides important insights into how stakeholders engage with the Institute’s offerings and highlights areas where service delivery can be strengthened under the PMCS framework. The most widely used service is the provision of improved seeds, such as rice, cassava, and other crop varieties, which accounts for an overwhelming 75.71% of responses. This demonstrates that seed access remains the cornerstone of farmers’ interaction with CARI, reflecting both the high demand for quality planting materials and the central role of seed distribution in improving productivity across Bong County. The strong reliance on improved seeds also reinforces the need for CARI to expand seed multiplication programs and strengthen last-mile distribution systems to meet growing demand.

Farmer training emerges as the second most utilized service, with 24.84% of respondents participating in capacity-building activities. This suggests that training programs are reaching a considerable share of farmers, yet there is still room to scale up outreach, particularly in districts with low access to formal extension support. Meanwhile, 17.42% of the farmers reported not using any CARI service at all, a sizeable segment that signals existing gaps in awareness, accessibility,

or service reach. Addressing this disconnect will be essential for CARI’s client engagement strategy, especially in underserved communities.

Other services, such as extension support (12.47%) and technical assistance (4.22%), show moderate utilization, indicating that while some farmers benefit from field-level advisory services, many more remain unserved. Use of research outputs, soil or seed testing, demonstration plots, market linkages, and postharvest value addition services remain relatively low, each accounting for less than 5% of total responses. These low figures point to underutilization of key services that are essential for modernizing agricultural practices, improving market competitiveness, and enhancing overall farm performance.

The limited uptake of postharvest, market linkage, storage, and mechanization services highlights critical gaps in the agricultural value chain where farmers continue to face constraints beyond production. Such gaps align directly with CARI’s mandate to provide comprehensive research-driven solutions across the entire agricultural system. Under PMCS, addressing these low-utilization services through targeted communication, demonstration activities, and service decentralization could significantly broaden CARI’s impact.

Finally, the service utilization pattern reveals a reliance on basic inputs and training, with limited engagement in higher-level technical and value-added services. This underscores the need for CARI to enhance visibility, accessibility, and responsiveness across all service categories. By aligning its interventions with the needs identified through this service-use pattern, CARI can strengthen institutional performance, improve client satisfaction, and ensure more equitable and effective service delivery for farmers throughout Bong County.

8.1. CARI Services Used by farmers

Services	Frequency	Percentage
Improved seeds (Rice, Cassava ... etc)	826	75.71
Farmer Training	271	24.84
None	190	17.42
Extension Services	136	12.47
Technical Support	46	4.22
Research Output	44	4.03
Seed, Soil... Testing	13	1.19
Others	12	1.1

Post-harvest and Value addition	8	0.73
Demonstration Plots	6	0.55
Market Linkages	4	0.37
Milling of Seeds	2	0.18
Storage Facilities	1	0.09
Farm Machinery	1	0.09

9.0. Farmers' Interaction with CARI Services

The interaction patterns between farmers and CARI services reveal important insights into how frequently stakeholders engage with the institution, and how these engagement levels vary by gender. Overall, most farmers interact with CARI only occasionally, with 44.82% reporting that they access services once or twice a year. This indicates that while CARI's reach is relatively broad, the depth and regularity of engagement remain limited. Male farmers constitute a slightly higher proportion of those interacting occasionally (57.67%), compared to women (42.33%), suggesting that men may have more opportunities or mobility to participate in periodic service activities.

A significant proportion of farmers, 27.31%, reported interacting with CARI rarely, reflecting potential barriers such as distance, limited awareness, or insufficient community outreach. The gender distribution within this group is almost balanced, with men representing 50.67% and women 49.33%, suggesting that both genders face similar constraints in accessing services infrequently. Meanwhile, only 13.93% of farmers engage frequently, on a quarterly basis with a higher share of men (57.89%) compared to women (42.11%). Very frequent interaction, defined as monthly or more, is even lower at 7.52%, though again dominated by male participants (62.2%), suggesting that the most regular users of CARI services are men who may hold leadership roles or have stronger ties to extension networks.

Alarming, 6.42% of respondents reported never interacting with CARI services. This group is evenly split between men and women, indicating that pockets of farmers, regardless of gender, remain completely disconnected from the institution's support system. Such disengagement highlights potential service delivery gaps, particularly in remote communities or among farmers who lack access to information channels about CARI programs.

The interaction patterns underscore the need for CARI to amplify outreach efforts, strengthen decentralized extension delivery, and adopt gender-responsive engagement strategies.

Women consistently appear less likely to engage frequently with CARI services, which may be influenced by time burdens, mobility constraints, or sociocultural norms. Under the (PMCS) framework, CARI can leverage these insights to tailor interventions, such as community-based training, targeted communication strategies, and mobile outreach teams to improve regular engagement with both male and female farmers. Enhancing the frequency and accessibility of service interactions will be critical to strengthening client satisfaction, increasing service uptake, and advancing the overall effectiveness of CARI’s service delivery in Bong County.

9.1. Farmers interaction with CARI Services

	Overall		Male		Female	
	Freq.	Percent	Freq.	Percent	Freq.	Percent
Frequently (quarterly)	152	13.93	88	57.89	64	42.11
Never	70	6.42	35	50	35	50
Occasionally (once or twice a year)	489	44.82	282	57.67	207	42.33
Rarely	298	27.31	151	50.67	147	49.33
Very Frequently (monthly or more)	82	7.52	51	62.2	31	37.8
Total	1,091	100	607	55.64	484	44.36

10.0. Service Delivery Status

The chart presents an assessment of CARI’s service delivery performance across three key dimensions, Professionalism, Accessibility, and Quality as rated by respondents. These ratings are categorized into five levels: Excellent, Good, Poor, Very Good, and Very Poor. The data reflects a generally positive perception of CARI’s service delivery, with the majority of respondents rating the institution between Good and Very Good across all indicators. However, the ratings also highlight areas requiring attention to ensure consistent service improvement under the PMCS framework.

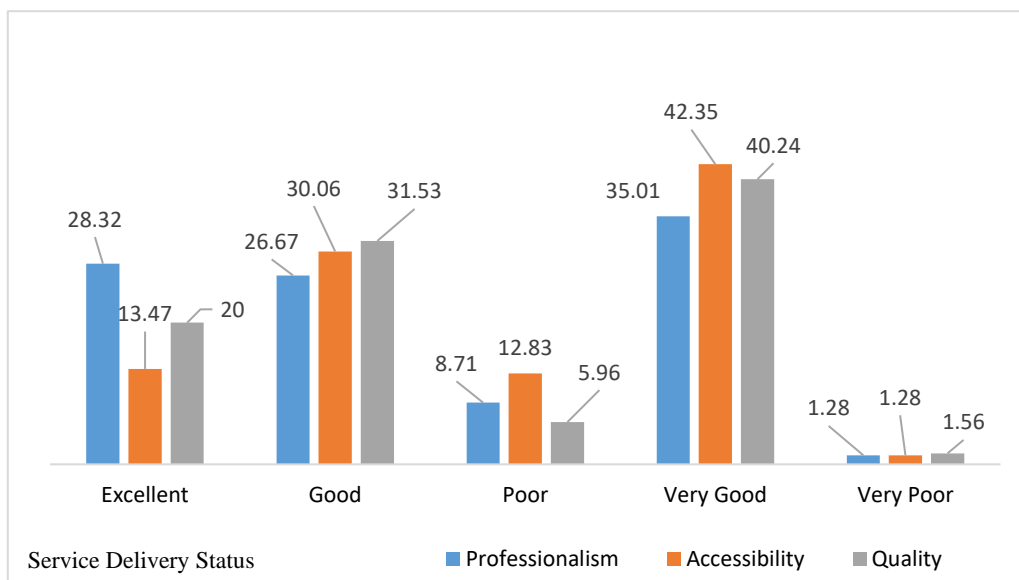
To begin with, the category “Very Good” received the highest ratings across all three indicators, suggesting that most respondents view CARI’s services as effective and reliable. Accessibility stands out most strongly in this category, reaching the highest score, followed closely by quality and professionalism. This indicates that farmers and service users find CARI’s services easy to reach and responsive, a key outcome expected under PMCS. The strong ratings for quality further suggest that CARI’s technical service delivery, whether through research outputs, training, or field support is generally meeting client expectations.

The “Excellent” category also shows significant positive feedback, especially for professionalism. This implies that CARI staff are perceived as respectful, knowledgeable, and supportive in their interactions with clients. Quality and accessibility also appear in this category, though at slightly lower levels. This demonstrates that while some respondents experience superior service performance, the institution can build on this momentum to push more clients toward experiencing excellence consistently.

In contrast, ratings in the “Good” category reveal that a substantial portion of respondents believe CARI is performing well but still has room for improvement. All three indicators, professionalism, accessibility, and quality register notable values here, which may represent clients whose needs are being met but not exceptionally. For PMCS implementation, this segment is critical, as targeted interventions such as improved feedback loops, enhanced communication strategies, or better scheduling of services could elevate these users’ experiences from “good” to “very good” or “excellent.”

The “Poor” and “Very Poor” categories show very low ratings across all indicators, with only minimal responses recorded. This is a positive sign, indicating that only a small number of clients are dissatisfied. However, the presence of poor ratings especially in accessibility and professionalism signals that some clients still face barriers, such as difficulty reaching services, delays, or inconsistent staff engagement. Under PMCS, these outliers are important because they help CARI identify bottlenecks and address specific operational weaknesses.

The result demonstrates that CARI’s service delivery is perceived positively by most clients, with strong ratings in professionalism, accessibility, and quality. The dominance of “Very Good” ratings underscores effective service provision, while the presence of “Good” ratings highlights opportunities for targeted improvement. Minimal poor ratings indicate that challenges exist but are manageable. These insights are directly relevant to the PMCS framework, which aims to strengthen service standards, enhance accountability, and ensure continuous improvement in CARI’s client-facing operations.



11.0. Farmers’ Satisfaction with CARI Services

The chart below illustrates farmers’ levels of satisfaction with CARI services using both frequency and percentage values across five rating categories: Very Satisfied, Satisfied, Dissatisfied, Neutral, and Very Dissatisfied. Overall, the distribution shows a predominantly positive perception of CARI’s services, with the majority of respondents falling within the “Very Satisfied” and “Satisfied” categories. The trends are essential for assessing service delivery effectiveness under CARI’s PMCS and for identifying areas that need improvement.

To begin with, the largest group of respondents, 471 farmers, representing 43.17% reported being *satisfied* with CARI’s services. This indicates that nearly half of all service users believe CARI is performing well in meeting their needs, offering reliable support, and delivering services that align with expectations. The strong performance in this category suggests a solid foundation of trust and appreciation for CARI’s activities, especially in key operational areas such as extension support, input provision, training, and technical assistance.

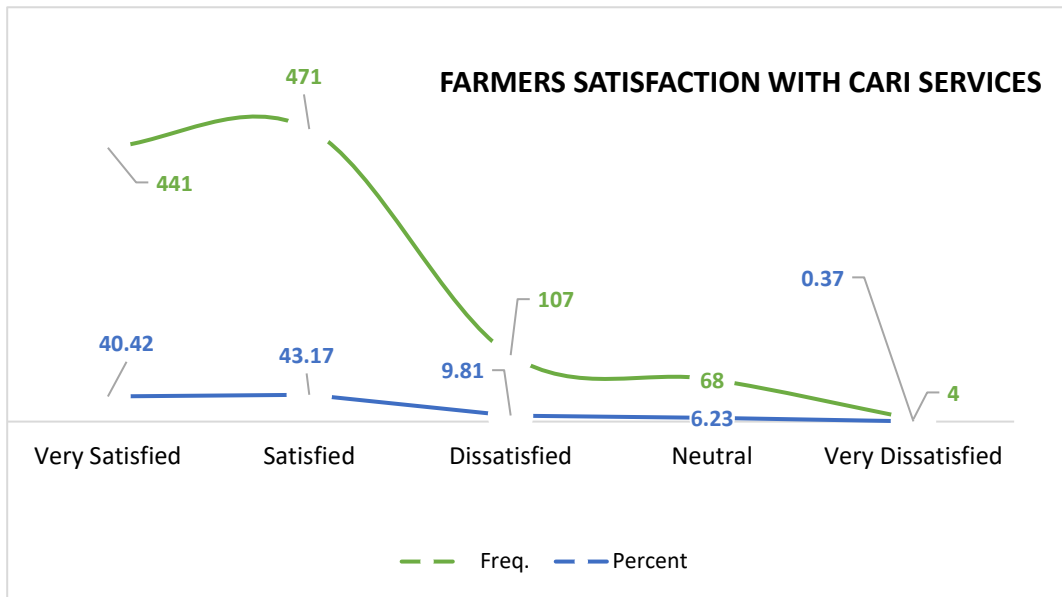
The second-highest category is “Very Satisfied,” with 441 respondents (40.42%). This is a highly encouraging outcome, demonstrating that a significant portion of farmer’s experience CARI’s services as excellent. Their experiences likely reflect efficient staff interactions, timely support, high-quality technologies or inputs, and meaningful engagement during field activities. The combination of “Satisfied” and “Very Satisfied” ratings shows that over 83% of respondents hold positive views, underscoring CARI’s strong service reputation.

In contrast, the “Neutral” category accounts for 68 farmers (6.23%), representing those who neither express satisfaction nor dissatisfaction. These farmers likely experienced average or inconsistent service encounters. While this group is relatively small, it serves as an opportunity for CARI to convert neutral users into satisfied ones by strengthening communication, follow-ups, and responsiveness.

The proportion of farmers expressing dissatisfaction is relatively low. The “Dissatisfied” category accounts for 107 farmers (9.81%). Although not large, this group is important for understanding gaps in service delivery. Farmers in this category may have experienced delays, limited access to inputs, inadequate follow-ups, or unmet expectations during extension activities. Addressing these concerns is essential for improving perceptions and ensuring equity in CARI service delivery.

The smallest category, “Very Dissatisfied” includes only 4 farmers (0.37%). This extremely low figure shows that severe dissatisfaction with CARI services is rare. Nonetheless, their concerns should not be overlooked, as such extremes often point to systemic issues in specific localities or unique cases where service delivery may have broken down.

Generally, the results reveal a predominantly positive satisfaction landscape, with minimal dissatisfaction among farmers. This performance demonstrates that CARI is effectively fulfilling its mandate under the Performance Management and Compliance System framework. At the same time, the presence of dissatisfied and neutral respondents provides essential feedback for continuous improvement. Strengthening feedback mechanisms, enhancing service accessibility, and prioritizing farmer follow-ups can ensure that CARI maintains and expands its high levels of satisfaction across all communities it serves.



12.0. Challenges Affecting CARI Service Delivery to Farmers

The assessment of challenges faced by farmers in accessing services highlights several critical barriers that significantly affect the effectiveness of CARI’s service delivery. Foremost among these challenges is transportation, which emerged as the most frequently reported issue. Farmers face difficulties in reaching service points due to the lack of vehicles, poor road networks, and bad road conditions. In many instances, transportation challenges are compounded by other service delivery gaps, such as communication or training, underscoring the interconnected nature of these obstacles. Limited mobility not only restricts farmers’ physical access to seed, inputs, and technical support but also delays service provision and reduces overall program efficiency.

Closely linked to transportation issues are communication and contact challenges. Many farmers reported the absence of designated contact persons, difficulty reaching service providers, and general gaps in information flow. These communication barriers hinder timely access to technical advice, reduce awareness of available services, and limit farmers’ ability to provide feedback. When combined with transportation constraints, these gaps create significant delays and reduce the overall effectiveness of CARI field interventions.

Financial constraints also play a significant role in limiting farmers’ access to services. Many respondents indicated that insufficient funds or lack of financial support prevented them from participating fully in service programs. This economic barrier is closely tied to other challenges, such as input accessibility and market access, highlighting the need for integrated financial and technical support mechanisms.

Beyond logistical and economic challenges, some farmers also noted the absence of regular field visits, monitoring, and awareness campaigns, which further limits their understanding and utilization of available services. Additionally, environmental and structural issues, such as poor storage facilities, pest attacks, and remoteness of farms, compound these challenges and affect both productivity and service effectiveness.

Addressing these challenges requires a holistic approach that improves access, strengthens communication channels, ensures timely provision of inputs, and builds farmers' capacity through training and awareness. By tackling these interlinked issues, CARI can enhance service delivery, increase farmer engagement, and improve overall productivity and program outcomes.

13.0. Recommendations to Improve CARI Service Delivery

The feedback from stakeholders highlights several key areas where CARI can enhance its service delivery to better meet farmer and community needs. Foremost, stakeholders emphasized the importance of outreach programs. Farmers need proactive engagement and consistent field presence to ensure they are aware of available services, inputs, and technical guidance. Outreach also strengthens communication, enabling farmers to receive timely information and provide feedback, which is critical for improving service relevance and responsiveness.

Another prominent area for improvement is research, innovation, and technology transfer. Respondents highlighted the need for CARI to produce more relevant research outputs and develop innovative technologies that address local agricultural challenges. Delivering practical research results and introducing improved crop varieties, machinery, and techniques can directly enhance productivity and farmer livelihoods. In addition, making these technologies accessible and demonstrating their use through field trials can encourage adoption and trust in CARI services.

Provision of inputs and resources was also a recurring theme. Stakeholders consistently requested that CARI ensure the availability and timely distribution of quality seeds, and other essential farming inputs. Some responses indicated the need for machinery and tools to improve efficiency and post-harvest handling. Access to inputs is closely linked with farmers' capacity to implement improved practices, making it a critical component of service effectiveness.

Closely related to input provision is the need for training and capacity building. Stakeholders emphasized the importance of regular and targeted training programs that cover modern agricultural practices, input use, post-harvest management, and market-oriented farming. Training initiatives combined with field visitation allow for hands-on demonstration and continuous guidance, ensuring farmers can effectively implement what they learn.

Extension services and field visitation were identified as additional areas for improvement. Stakeholders noted the need for CARI staff to maintain regular presence on farms, providing technical advice, monitoring progress, and ensuring that interventions are adapted to local conditions. Field-based engagement fosters stronger relationships between farmers and extension staff, builds trust, and allows for rapid identification of emerging challenges.

Other suggestions highlighted market linkages, awareness creation, and infrastructure support. Stakeholders suggested that CARI facilitate access to markets, and use awareness campaigns, including radio programs, to disseminate information widely. This integrated approach ensures that farmers not only produce more but also have the means to sell their products and benefit economically.