

# A Baseline Study on Digital Inclusion Among Women-Led Green Businesses

---

FOSTERING DIGITAL RIGHTS AWARENESS AND ADVOCACY FOR WOMEN  
GREEN-PRENEURS

**Supported by:** Collaboration on International ICT Policy for East and Southern Africa (CIPESA)

**Prepared by:** Girls for Climate Action (G4CA)

**Districts Covered:** Iganga, Bugweri, Mayuge, and Bugiri

**Date:** June 2025

Girls for Climate Action (2025). Baseline Study on Digital Inclusion Among Women-Led Green Enterprises in Eastern Uganda: Girls for Climate Action with support from CIPESA.

---

# Acknowledgement

This baseline study was made possible through the generous support of the Collaboration on International ICT Policy for East and Southern Africa (CIPESA). We are deeply grateful for their partnership and commitment to advancing digital inclusion for women in Uganda.

We extend sincere appreciation to the leadership and implementation team at Girls for Climate Action (G4CA), whose coordination, fieldwork, and community engagement ensured the successful delivery of this study. Special thanks go to the district officials, community development officers, extension workers, and local leaders in Iganga, Bugweri, Mayuge, and Bugiri who generously offered their time and insights.

We acknowledge the 924 women entrepreneurs and green business owners who participated in the survey, as well as the 12 key informants who shared their institutional perspectives. Their voices and lived experiences shaped the depth and relevance of this report.

Finally, we recognize the tireless work of the data collection team, facilitators, and transcribers who worked under challenging conditions to gather and validate the findings. This report is a product of their dedication to truth, equity, and transformative change.

# Contents

---

|                                                                                      |           |
|--------------------------------------------------------------------------------------|-----------|
| <b>Acknowledgement</b>                                                               | <b>2</b>  |
| <b>List of Abbreviations</b>                                                         | <b>4</b>  |
| <b>Executive Summary</b>                                                             | <b>5</b>  |
| <b>1. Introduction</b>                                                               | <b>6</b>  |
| 1.1 Background and Context                                                           | 6         |
| 1.2 Purpose of the Study                                                             | 6         |
| 1.3 Study Objectives                                                                 | 6         |
| 1.4 Scope and Rationale                                                              | 6         |
| <b>2. Methodology</b>                                                                | <b>8</b>  |
| 2.1 Study Design                                                                     | 8         |
| 2.2 Study Area and Population                                                        | 8         |
| 2.3 Sampling and Sample Size                                                         | 8         |
| 2.4 Data Collection Methods and Tools                                                | 9         |
| 2.5 Data Analysis                                                                    | 9         |
| 2.6 Ethical Considerations                                                           | 9         |
| 2.7 Limitations                                                                      | 9         |
| <b>3.0 Key Findings: Survey</b>                                                      | <b>10</b> |
| 3.1 Respondent Profile: Gender, Age, and District Distribution                       | 10        |
| 3.2 Nature and Distribution of Agri-Businesses Surveyed                              | 11        |
| 3.3 Size of Agri-Businesses                                                          | 13        |
| 3.4 Frequency of Digital Tool Usage                                                  | 14        |
| 3.5 Primary Uses of Digital Tools                                                    | 15        |
| 3.6 Barriers to Digital Tool Use                                                     | 16        |
| 3.7 Access to Digital Skills Training                                                | 16        |
| 3.8 Specific Training Needs                                                          | 17        |
| 3.9 Self-Rated Digital Literacy                                                      | 17        |
| <b>4.0 Key Findings: Key Informant Interviews</b>                                    | <b>19</b> |
| 4.1 Key Informant Insights on Digital Engagement                                     | 19        |
| 4.2 Gender-Specific Barriers to Digital Access                                       | 20        |
| 4.3 Policy Recommendations to Improve Digital Access for Women-Led Green Enterprises | 21        |
| 4.4 level of digital literacy among green-business                                   | 22        |
| 4.5 Are Digital Rights Being Addressed?                                              | 23        |
| 4.6 Role of Stakeholders in Advancing Digital Inclusion                              | 23        |
| 4.7 Support Required to Strengthen Digital Tool Usage                                | 24        |
| <b>5. Emerging Issues and Community Voices</b>                                       | <b>25</b> |
| 5.1 Qualitative Perspectives                                                         | 25        |
| 5.2 Structural, Cultural and Policy-Level Reflections                                | 25        |
| 5.3 Youth and Gender Dynamics in Digital Spaces                                      | 26        |
| <b>6. Recommendations</b>                                                            | <b>27</b> |
| 6.1 For Government                                                                   | 27        |
| 6.2 For Civil Society and NGOs                                                       | 27        |
| 6.3 For Private Sector and Tech Providers                                            | 27        |
| 6.4 For Local Leaders and Community Actors                                           | 27        |
| <b>7. Conclusions</b>                                                                | <b>28</b> |
| <b>Appendices</b>                                                                    | <b>29</b> |
| Appendix A: Survey Tool                                                              | 29        |
| Appendix B: Key Informant Interview (KII) Guide                                      | 31        |
| Appendix C: Kobo Links                                                               | 32        |

---

## List of Abbreviations

|               |                                                                        |
|---------------|------------------------------------------------------------------------|
| <b>AGYW</b>   | Adolescent Girls and Young Women                                       |
| <b>CBO</b>    | Community-Based Organization                                           |
| <b>CIPESA</b> | Collaboration on International ICT Policy for East and Southern Africa |
| <b>FGD</b>    | Focus Group Discussion                                                 |
| <b>G4CA</b>   | Girls for Climate Action                                               |
| <b>GBV</b>    | Gender-Based Violence                                                  |
| <b>ICT</b>    | Information and Communication Technology                               |
| <b>KII</b>    | Key Informant Interview                                                |
| <b>NGO</b>    | Non-Governmental Organization                                          |
| <b>SPSS</b>   | Statistical Package for the Social Sciences                            |
| <b>SRHR</b>   | Sexual and Reproductive Health and Rights                              |
| <b>URA</b>    | Uganda Revenue Authority                                               |
| <b>VSLA</b>   | Village Savings and Loan Association                                   |
| <b>YW</b>     | Young Women                                                            |
| <b>UIA</b>    | Uganda Investment Authority                                            |

# Executive Summary

This baseline study explores the realities of digital inclusion among women-led green businesses in Eastern Uganda, specifically in the districts of Iganga, Bugweri, Mayuge, and Bugiri. The study set out to understand how digital exclusion impacts women's economic participation in rural value chains, and what is required to shift this reality.

A cross-sectional study design was employed, utilizing both quantitative and qualitative methods to assess digital inclusion among women-led green businesses. The quantitative strand engaged 924 survey respondents, while the qualitative component involved 12 key informant interviews (KIIs). Findings revealed that 98.2% of participants owned a mobile phone; however, utilization remained limited, with 91.5% using them primarily for voice calls and 73.4% for mobile money transactions. Advanced digital functions such as digital marketing, recordkeeping, or accessing agri-business platforms were used by less than 18% of respondents. Additionally, 85.9% of women had never received formal digital skills training, and 54.6% self-rated their digital literacy as low or very low.

Key informants highlighted disparities not only between individuals but also across districts. While some communities benefit from NGO-led training or pilot digital platforms, others remain entirely disconnected. Informants described a fragmented digital ecosystem, shaped by weak infrastructure, gendered power dynamics, and limited capacity to implement national digital policies at the local level.

Gendered norms continue to shape women's digital access and usage. Some women feared being judged or ridiculed for owning smartphones, particularly in conservative communities where such ownership is associated with immorality. In several instances, phones were shared or controlled by male partners, undermining women's autonomy and limiting their ability to engage with digital tools for business.

Structural barriers, including unreliable electricity, poor internet coverage, and the high cost of data, remain pervasive and disproportionately affect rural women entrepreneurs. Digital rights are poorly understood, with most respondents unfamiliar with the term and unaware of how it relates to their lives as business owners.

Despite these challenges, the demand for digital inclusion is strong and growing. Women expressed a desire for practical, business-focused training—particularly in digital marketing, pricing, mobile money, and customer communication. KIIs reinforced this need, pointing to the importance of contextualized skilling, peer mentorship, and targeted stakeholder involvement. There were consistent calls for bundled interventions that combine training, financing, infrastructure, and cultural change, rather than treating digital access as a standalone solution.

This report provides a foundation for rights-based, gender-responsive programming. Meaningful digital inclusion will require more than access to devices; it must dismantle the social, structural, and relational barriers that continue to limit women's full participation in the digital economy.

# 1. Introduction

## 1.1 Background and Context

In Eastern Uganda, women are central to green business. They cultivate land, manage sales, process goods, and support household income. Yet as the digital economy expands, many of these women-led businesses remain disconnected from emerging opportunities. While mobile technologies are common, they are not always transformative.

The project “Fostering Digital Rights Awareness and Advocacy for Women Green-Preneurs,” implemented by Girls for Climate Action with support from CIPESA, was developed to address this digital gap. It responds to growing concerns that the digital divide is not just about access, but also about equity and empowerment. Women-led green enterprises including those in agriculture, food processing, and clean energy are particularly at risk of being left behind.

The study was conducted across the four districts of Iganga, Bugweri, Mayuge, and Bugiri. These areas are typical for their vibrant but underserved ecosystems of women-led enterprises and known gaps in digital engagement. The baseline provides insight into how women navigate digital challenges and what they need to more meaningfully participate in a tech-driven economy.

## 1.2 Purpose of the Study

This baseline study aims to build an accurate, community-informed picture of how digital technologies intersect with women’s enterprise. The goal is to inform practical, responsive programming under the CIPESA initiative. The study explores how women access, use, and relate to digital tools—and the structural and social forces shaping that engagement.

## 1.3 Study Objectives

- To assess current patterns of digital tool usage among women-led green businesses.
- To evaluate levels of digital literacy and access to training.
- To examine cultural, economic, and structural barriers limiting digital inclusion.
- To understand local awareness and understanding of digital rights.
- To generate actionable recommendations for inclusive digital programming.

## 1.4 Scope and Rationale

The baseline study was designed with a target of reaching 1,000 participants across four districts Mayuge, Bugiri, Bugweri, and Iganga. As outlined in the concept note, the methodology included:

- 820 surveys with green business owners (205 per district)
- 60 Key Informant Interviews (15 per district)
- 20 Focus Group Discussions (5 per district, with 6 participants per group)

---

What was achieved:

- A total of 924 valid survey responses were collected, slightly exceeding the target. Data collection was concentrated in Iganga, Bugweri, Mayuge, and Bugiri.
- 12 Key Informant Interviews (KIIs) were successfully conducted across the districts, fewer than planned. This was due to scheduling conflicts and limited availability of technical officers at the time of fieldwork.
- Focus Group Discussions (FGDs) were initially planned but not conducted due to time constraints.

While some elements of the original design were adjusted, the core data collection yielded robust and representative insights. The study team prioritized depth of engagement and data quality, ensuring that the perspectives of women-led green enterprises were authentically captured.

## 2. Methodology

### 2.1 Study Design

The study employed a mixed-methods design, integrating both quantitative and qualitative to provide a holistic understanding of digital tool usage, digital rights literacy, and the barriers faced by women-led green businesses in Eastern Uganda.

The quantitative component utilized a descriptive cross-sectional survey, appropriate for assessing the prevalence of digital access, usage behavior, literacy levels, and systemic barriers at a specific point in time. This design was effective in establishing baseline indicators and identifying programmatic entry points for improving digital inclusion. Data were collected using structured questionnaires administered to a total of 924 respondents across four districts.

The qualitative component involved Key Informant Interviews (KIIs) with 12 selected district stakeholders. These respondents were purposively selected based on their engagement with small and medium women-led green enterprises. The KIIs explored institutional insights, policy implementation gaps, and localized perspectives on gender and digital access.

### 2.2 Study Area and Population

The study focused on four districts in Eastern Uganda: Iganga, Bugweri, Mayuge, and Bugiri. Respondents included women running businesses in climate-smart agriculture, green processing, and related fields. Key informants included district officers in agriculture, production, and community development.

### 2.3 Sampling and Sample Size

For the quantitative component, a multi-stage, purposive sampling strategy was employed to ensure representation across geographies, business types, and age groups. The study targeted women-led green businesses operating in the districts of Iganga, Bugweri, Mayuge, and Bugiri. Sub-counties and parishes were pre-identified based on existing program footprints, known clusters of green enterprises, and accessibility.

Although a probability sampling technique was not used, the sample size was determined using a conservative statistical approach for estimating proportions in a large population. Assuming a 95% confidence level, 5% margin of error, and maximum variability ( $p = 0.5$ ), the minimum required sample size was calculated using the formula:

$$n = (Z^2 * p * (1 - p)) / d^2$$

Where:

$n$  = sample size

- $Z$  = Z-score (1.96 for 95% confidence)
- $p$  = estimated proportion (0.5 for maximum variability)
- $e$  = margin of error (0.05)

$$n = (1.96^2 \times 0.5 \times 0.5) / 0.0025 = 384$$

To enhance district-level insights and accommodate potential non-response or data cleaning losses, the sample size was more than doubled. A total of 924 valid responses were collected, distributed evenly across the four districts at 231 respondents per district.



---

For the qualitative component, 12 Key Informant Interviews (KIIs) were conducted. Informants were purposively selected from among production officers, veterinary personnel, fisheries officers, agricultural engineers, and community development officers individuals with district-level knowledge of green businesses and women's digital participation.

## 2.4 Data Collection Methods and Tools

Quantitative data were collected through face-to-face interviews using structured questionnaires. The questionnaire (attached in the annexes) was developed based on the study objectives and reviewed by technical staff for clarity and contextual relevance. A digital version of the tool was programmed in KoboToolbox to enable real-time data capture, validation, and monitoring.

Prior to data collection, two enumerators per district (8 in total) were recruited and trained virtually. The training covered ethical procedures, study objectives, KoboToolbox navigation, and data quality assurance protocols. Unique Kobo links were shared with enumerators to minimize duplication and track performance by district.

Data collection was conducted over a Two-week period. All interviews were captured using phones, uploaded to the Kobo server in real-time, and monitored for completeness and consistency. Upon completion, the dataset was exported to SPSS for cleaning, coding, and statistical analysis.

The qualitative component involved Key Informant Interviews (KIIs) conducted with 12 purposively selected district stakeholders, with participant consent, interviews were audio-recorded, transcribed verbatim, and analyzed thematically. NVivo software was used to facilitate coding and thematic mapping, enabling structured exploration of recurring patterns, perceptions, and institutional narratives across districts.

## 2.5 Data Analysis

Quantitative data from KoboToolbox were exported to SPSS for cleaning, coding, and analysis. Descriptive statistics, including frequencies and cross-tabulations, were used to summarize patterns in digital access, literacy, and tool usage across the four districts. Data were disaggregated by gender, age, and business type to highlight subgroup variations.

For the qualitative data, transcribed key informant interviews were analyzed thematically using NVivo. Emerging patterns were coded around themes such as infrastructure, digital rights awareness, gender dynamics, and stakeholder roles. Triangulation of quantitative and qualitative results helped validate key findings and provided deeper insight into the lived experiences behind the numbers.

## 2.6 Ethical Considerations

- Informed consent was secured from all participants.
- Data was anonymized to protect identity.
- Gender-sensitive practices were employed throughout, including use of female enumerators where appropriate.
- Interviews were conducted in safe and respectful environments.

## 2.7 Limitations

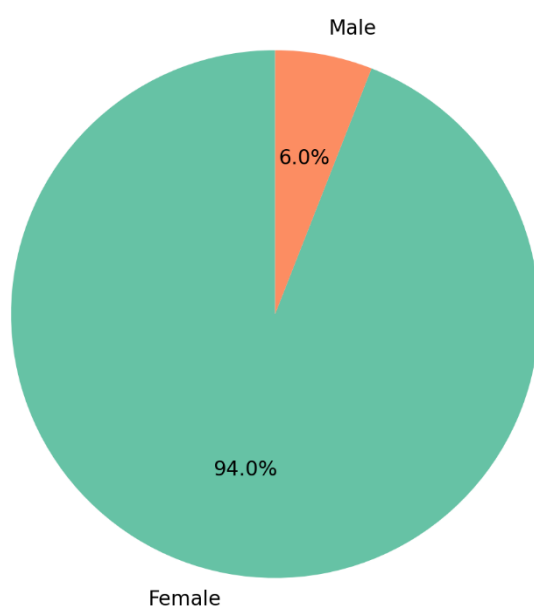
- The purposive nature of sampling limits generalizability.
- Awareness of digital rights was limited, which may have influenced responses.
- The study focused primarily on women; broader household dynamics were not explored in detail.
- Despite these limitations, the study offers a credible foundation for understanding the digital realities of women-led green businesses in the region.

## 3.0 Key Findings: Survey

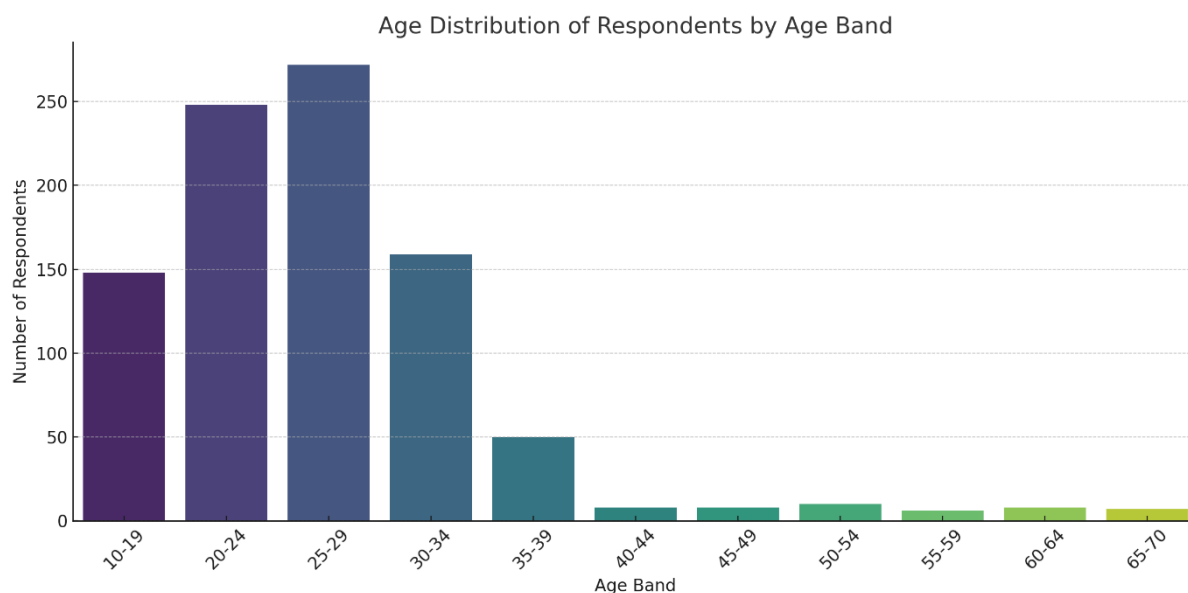
### 3.1 Respondent Profile: Gender, Age, and District Distribution

The baseline study engaged a total of 924 respondents across four districts in Eastern Uganda. A gendered lens reveals that women overwhelmingly dominated the sample, making up 94% (869 respondents) compared to 6% (55 respondents) who were men. This was in line with the study's focus on women-led green enterprises and signals a strong presence of women as primary actors in rural green business ecosystems. The limited male representation, while not the target, offered additional perspective on household dynamics and decision-making around digital engagement.

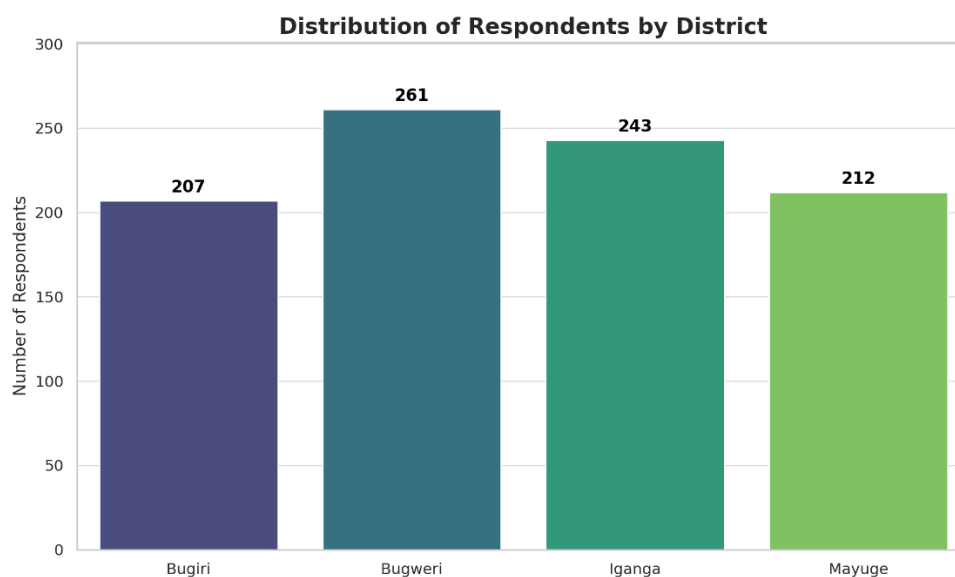
Gender Composition of Respondents (N=924)



In terms of age, the respondent pool reflected a broad spectrum, ranging from 15 to 70 years. However, the majority clustered between the ages of 20 and 30, with the 25-year age group alone accounting for the highest number of participants (93). This concentration in the 20s reflects the demographic youth bulge in Uganda and signals a strategic opportunity for youth-targeted digital skilling and innovation support. Younger women are not only active in green businesses but are also likely to be more adaptable to digital platforms if given the tools, training, and community acceptance.



Geographically, the survey was well balanced across the four project districts. Bugweri district accounted for the largest share with 261 respondents, followed by Iganga (243), Mayuge (212), and Bugiri (207). Women are central to green enterprise in these districts; the youth demographic offers a promising entry point for digital transformation; and each district presents unique opportunities and constraints that must be locally navigated. These findings provide a solid empirical foundation for the recommendations and programming that follow.

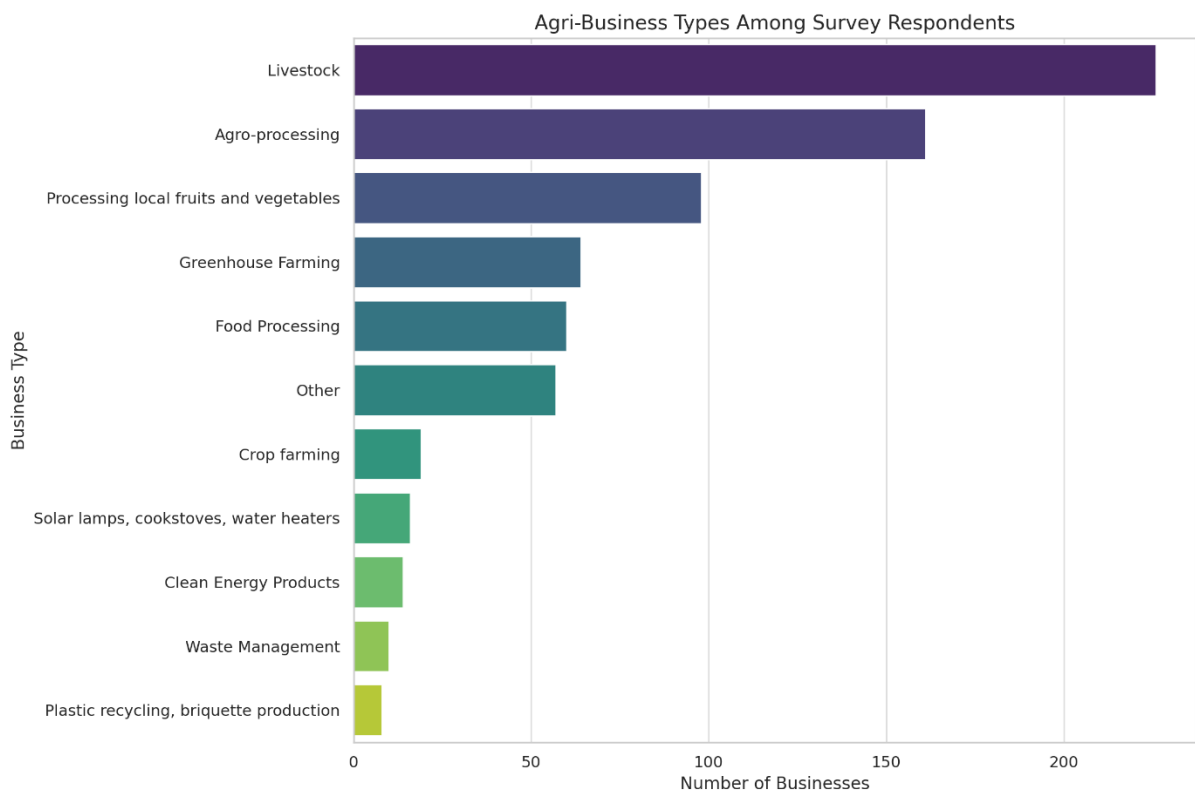
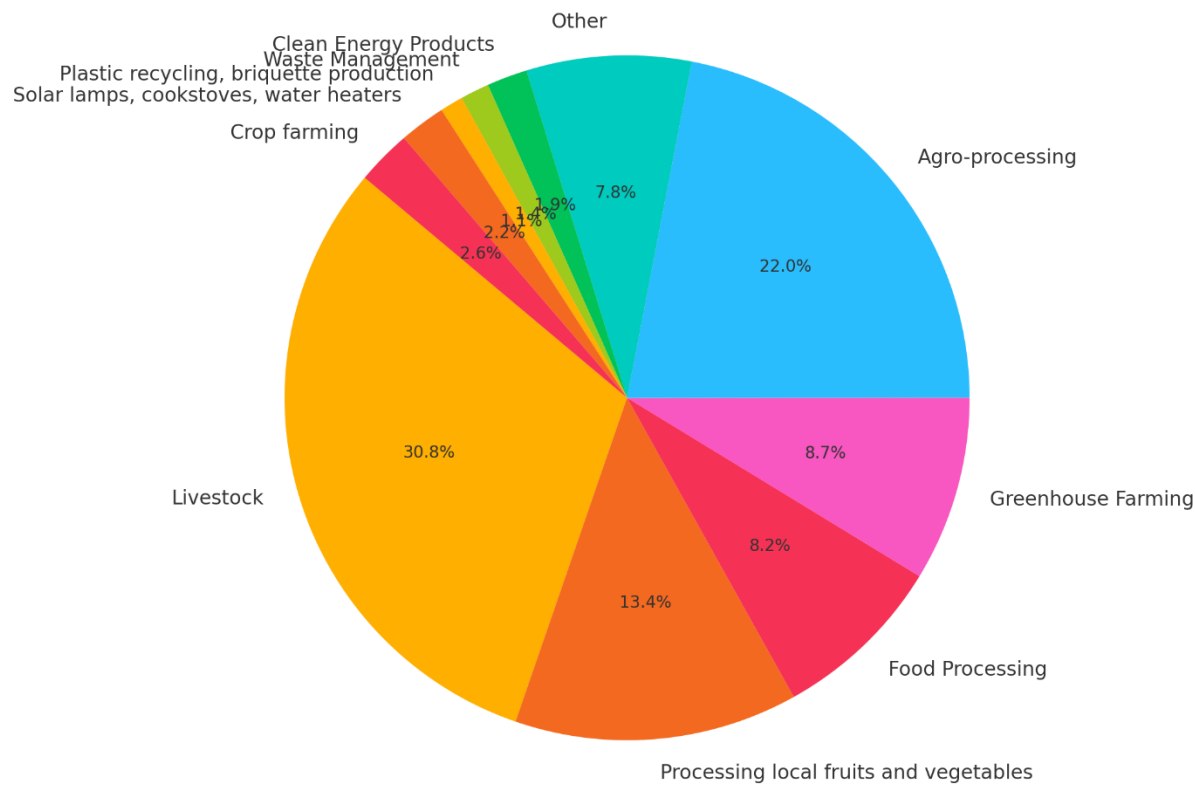


## 3.2 Nature and Distribution of Agri-Businesses Surveyed

The baseline study documented a broad spectrum of women-led green enterprises across Iganga, Bugweri, Mayuge, and Jinja districts, reflecting a mix of traditional agricultural livelihoods and emerging environmentally sustainable innovations.

Livestock-related enterprises constituted the largest share of the sample, with 226 businesses (24.5%) engaged in animal rearing for both subsistence and commercial purposes. This was followed by agro-processing ventures (17.4%), which included grain milling, cassava processing, and packaging of value-added products.

Distribution of Agri-Business Types Among Respondents



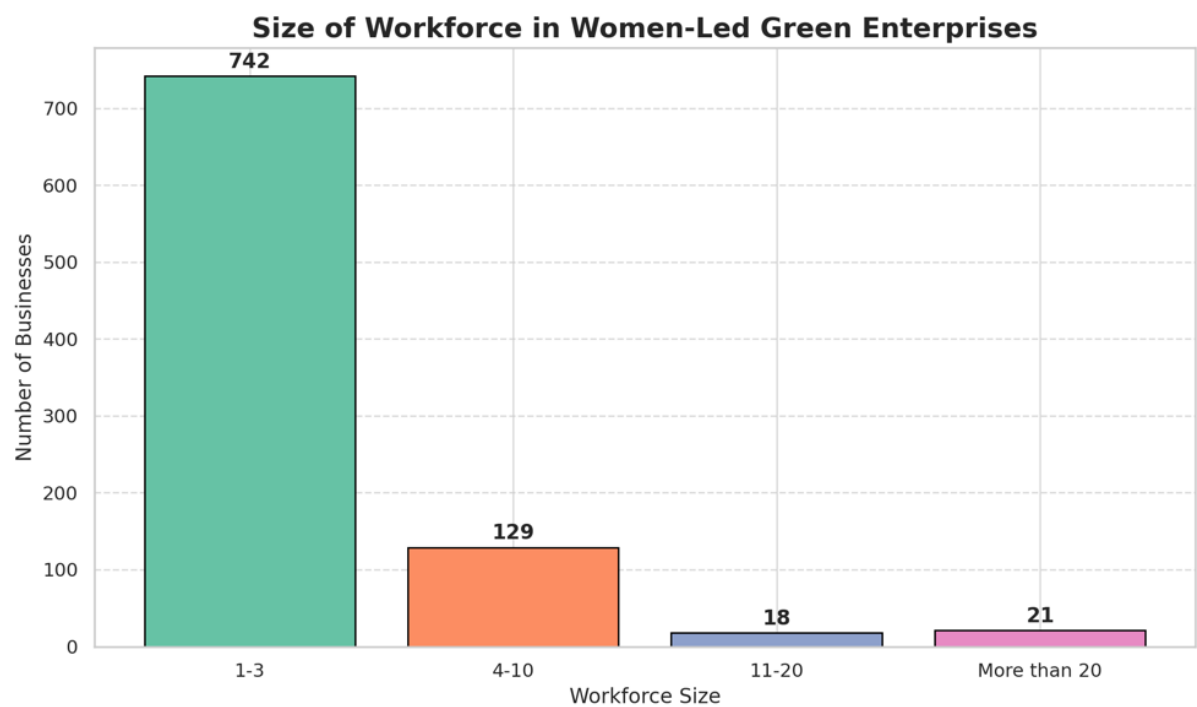
A growing proportion of respondents (10.6%) reported involvement in fruit and vegetable processing, often linked to seasonal surpluses and informal trade networks. Greenhouse farming, accounting for 6.9% of businesses, is gradually gaining traction in peri-urban areas, with women integrating climate-resilient methods such as drip irrigation, mulching, and vertical farming. Food preservation and basic food processing enterprises represented 6.5% of the sample. Meanwhile, a smaller but notable number of businesses were engaged in clean energy initiatives (e.g., briquette making, solar drying), waste management (e.g., organic composting), and plastic recycling together accounting for less than 5% but showing promise as part of Uganda’s growing circular economy.

64 identified themselves with “Other” business types outside mainstream classifications. These included vegetable retailers, charcoal sellers, tailors, shopkeepers, bakers, and mobile money agents. Such micro-enterprises are typically informal and home-based, often managed by women and youth operating on thin margins.

While many women entrepreneurs remain anchored in conventional agribusiness sectors, there is a visible shift toward innovation and sustainability. Digital inclusion efforts must therefore respond to both ends of this spectrum—supporting high-volume, low-tech enterprises while simultaneously catalyzing digital uptake among emerging eco-enterprises that are often overlooked in mainstream programming.

### 3.3 Size of Agri-Businesses

The majority of women-led green businesses surveyed were micro-enterprises, operating with minimal staffing structures. Out of the 910 valid responses to the question on business workforce:

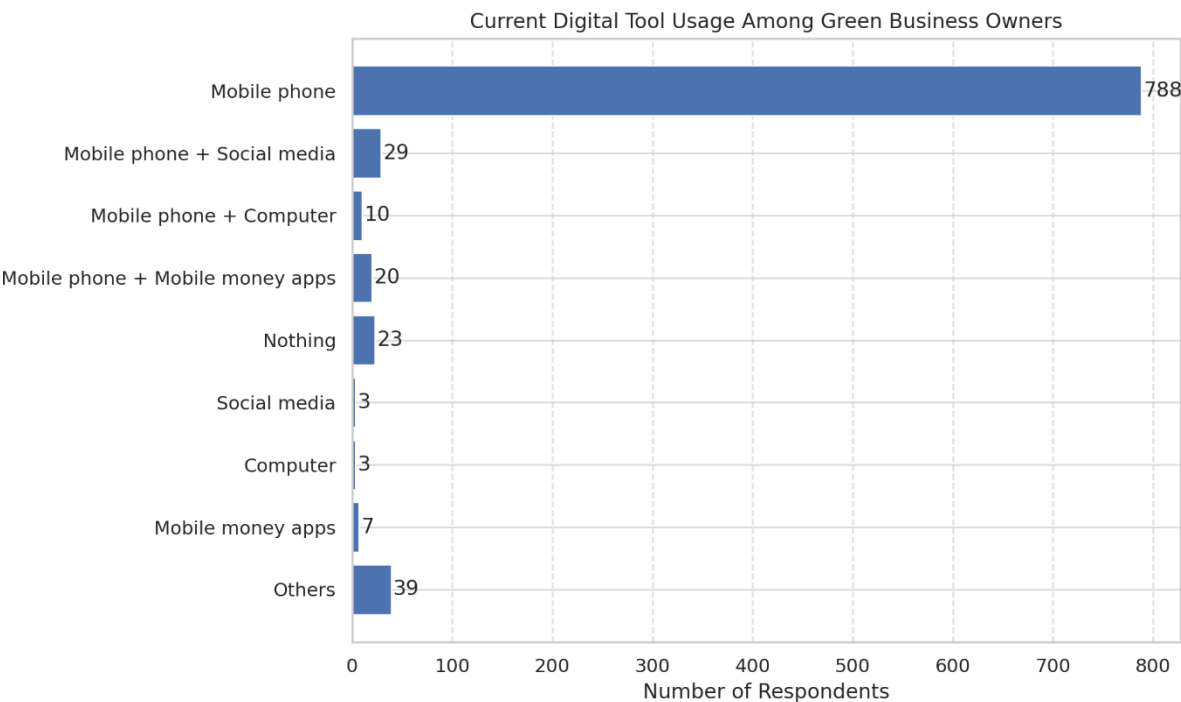


- 742 businesses (81.5%) reported having 1–3 people involved in daily operations—often limited to the owner and immediate family members.
- 129 enterprises (14.2%) had between 4–10 workers, suggesting a shift toward more organized small business models, often with seasonal or casual labor.
- A small number (18 businesses or 2%) employed between 11–20 people, while 21 enterprises (2.3%) reported having more than 20 workers, reflecting a nascent group of medium-scale businesses with greater growth potential.

This distribution confirms that the landscape of green enterprises in Eastern Uganda is predominantly informal and subsistence-based, with very few transitioning to structured employment or scalable operations. The dominance of single-person or family-run models also affects how these businesses interact with digital platforms highlighting the need for hands-on, low-barrier digital tools that are accessible to entrepreneurs with minimal staff support.

### 3.4 Frequency of Digital Tool Usage

The survey revealed that mobile phones are the most widely used digital tools among green business owners in the four districts. Out of the 922 valid responses, over 85% (788 respondents) reported relying on mobile phones as their primary digital device. However, the functionality of these phones was largely limited to basic operations such as voice communication and mobile money transactions.



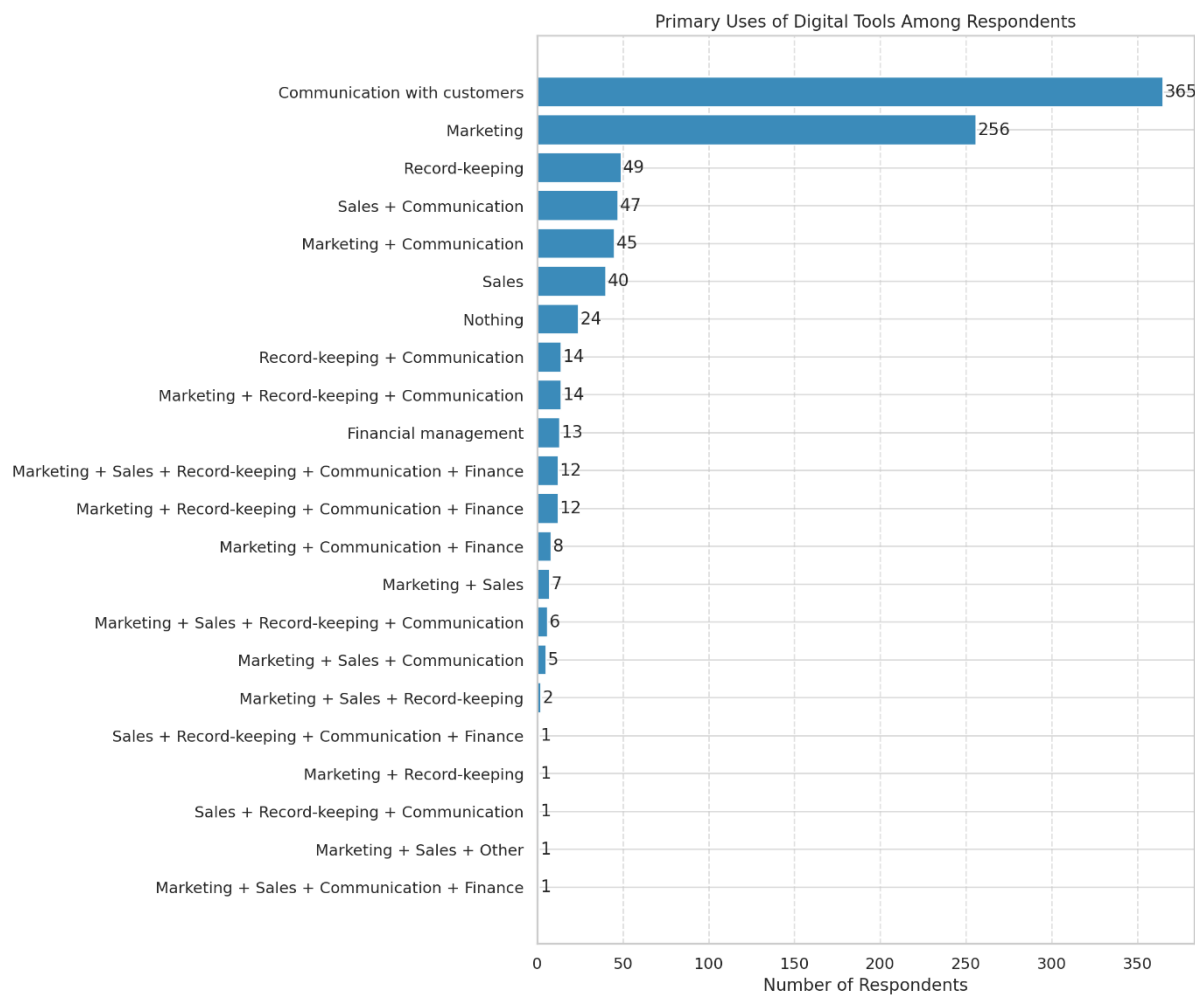
Only 29 respondents reported using mobile phones for social media, and 7 indicated combining mobile money and social media. A very small group less than 5% used combinations of digital tools that included computers, accounting software, or integrated platforms. For instance, only 2 respondents reported using accounting software alone, and 10 used both mobile phones and computers.

Interestingly, 23 respondents (2.5%) stated that they did not use any digital tools at all in their businesses. This signals a clear gap in digital adoption that may be linked to either access, knowledge, or trust in digital technologies.

The limited adoption of more advanced tools such as computers, accounting software, or digital marketing platforms suggests that while mobile access is high, the depth of digital engagement is still shallow. This points to the need for tailored digital literacy programs that not only promote access but also equip green entrepreneurs especially women with the confidence and skills to expand their digital toolkit. A small but notable group of respondents (39 out of 922) reported using a mix of digital tools beyond basic mobile phones. These included combinations such as mobile phones with computers, social media, mobile money apps, and even accounting software.

### 3.5 Primary Uses of Digital Tools

The baseline study revealed that communication with customers is the most common use of digital tools among green business owners, with 365 respondents (39.6%) reporting this as their primary function. This underscores the critical role that mobile phones play in maintaining client relationships, especially in remote areas where in-person interactions are limited.



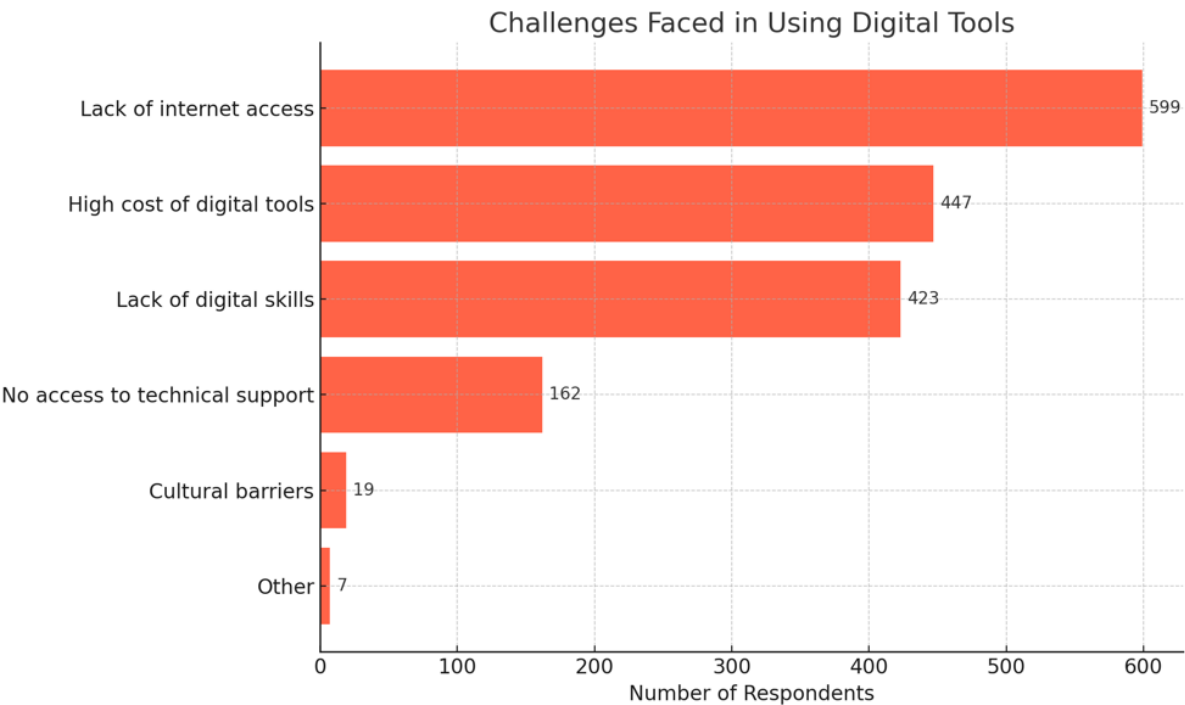
Marketing followed as the second most reported use, with 256 respondents (27.8%) leveraging digital platforms mostly social media to promote their products and services. However, many of these marketing activities were basic, often limited to photo sharing or product listing on WhatsApp or Facebook, rather than strategic digital marketing.

Record-keeping and sales were reported less frequently, with 49 (5.3%) and 40 (4.3%) respondents respectively citing them as primary uses. Only 13 respondents (1.4%) used digital tools mainly for financial management, pointing to a gap in digital literacy for business administration.

Notably, several respondents combined multiple functions such as marketing, communication, and record-keeping suggesting a small but growing group of more digitally advanced users. However, 24 respondents (2.6%) reported not using digital tools at all, which reflects persistent digital exclusion due to barriers such as affordability, literacy, or cultural constraints.

### 3.6 Barriers to Digital Tool Use

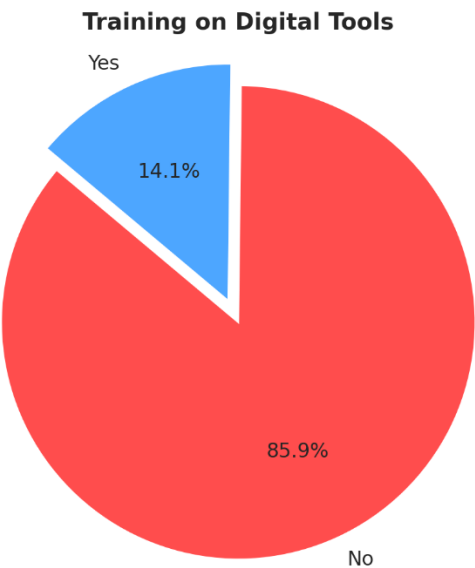
Three barriers consistently emerged across all four districts: lack of internet access, high cost of devices, and limited digital skills. Lack of internet access (599 mentions) remains the single most cited challenge, particularly in rural and peri-urban settings. This was followed closely by the cost of smartphones and digital tools (447), and limited user capacity (423) to navigate digital platforms.



These three barriers form a vicious cycle where even when tools are available, users may not know how to use them effectively or may lack affordable internet to sustain their usage. Addressing just one barrier in isolation is unlikely to shift the needle; integrated solutions are required.

### 3.7 Access to Digital Skills Training

The Across the four study districts, the baseline revealed a striking gap in digital capacity. Of the 924 women-led green business owners surveyed, only 130—just 14%—reported having received any form of training on digital tools. The remaining 86%, a clear majority, had never been trained.

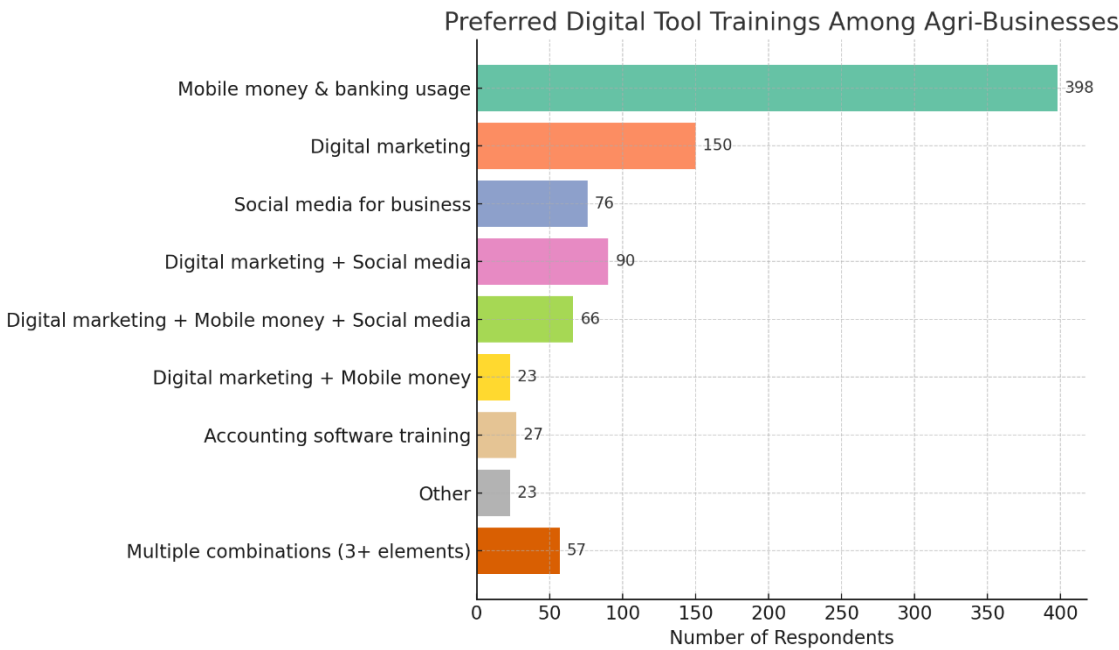




The absence of digital skilling came through not just in numbers, but in stories. Several women shared that while they owned phones, they lacked the confidence to use them beyond voice calls or mobile money. Some feared damaging their devices; others worried about being mocked by peers or misunderstood by their families. The idea of using phones for marketing, record-keeping, or pricing was unfamiliar sometimes even intimidating.

### 3.8 Specific Training Needs

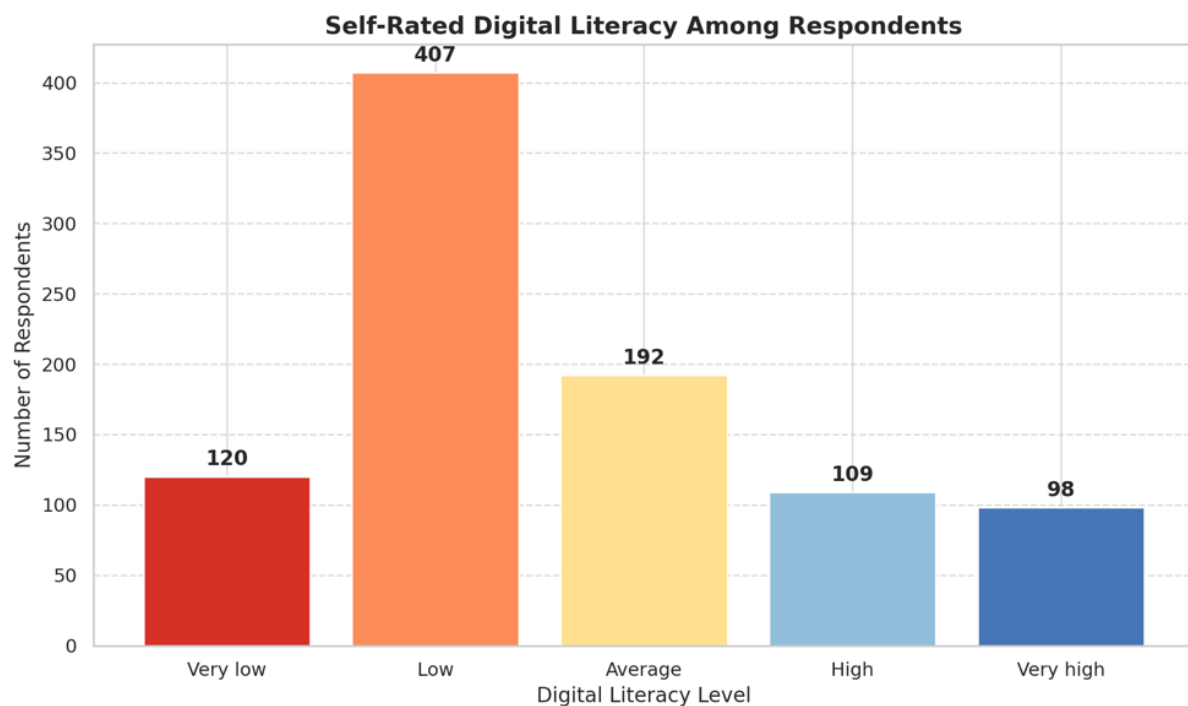
Respondents articulated a clear set of training priorities. Top among them was mobile money and digital banking (398 mentions), reflecting both the ubiquity of mobile finance and the need to use it more securely and strategically. Other key areas included digital marketing (150), social media for business (76), and combinations of all three (57+ mentions).



Only 27 respondents identified accounting software as a training need—suggesting either low awareness of its potential benefits or perceived complexity. The demand for integrated packages rather than standalone modules points to the need for blended, hands-on training that reflects the multi-functional reality of digital tools in small business environments.

### 3.9 Self-Rated Digital Literacy

The baseline findings paint a sobering picture of the current state of digital literacy among women-led green businesses in Eastern Uganda. While mobile phone ownership is widespread, digital fluency remains limited. Out of 926 respondents, only 98 (10.6%) rated their digital literacy as very high, and 109 (11.8%) rated it as high. A much larger proportion—407 respondents (44%)—rated their literacy as low, with an additional 120 (13%) identifying as very low.



Only 192 participants (20.7%) placed themselves in the average category, reflecting a general lack of confidence in using digital tools beyond basic functions like calling or mobile money. These findings confirm that while the hardware (phones) may be present, the software both in terms of skills and mindset is still missing for the majority.



## 4.0 Key Findings: Key Informant Interviews

### 4.1 Key Informant Insights on Digital Engagement

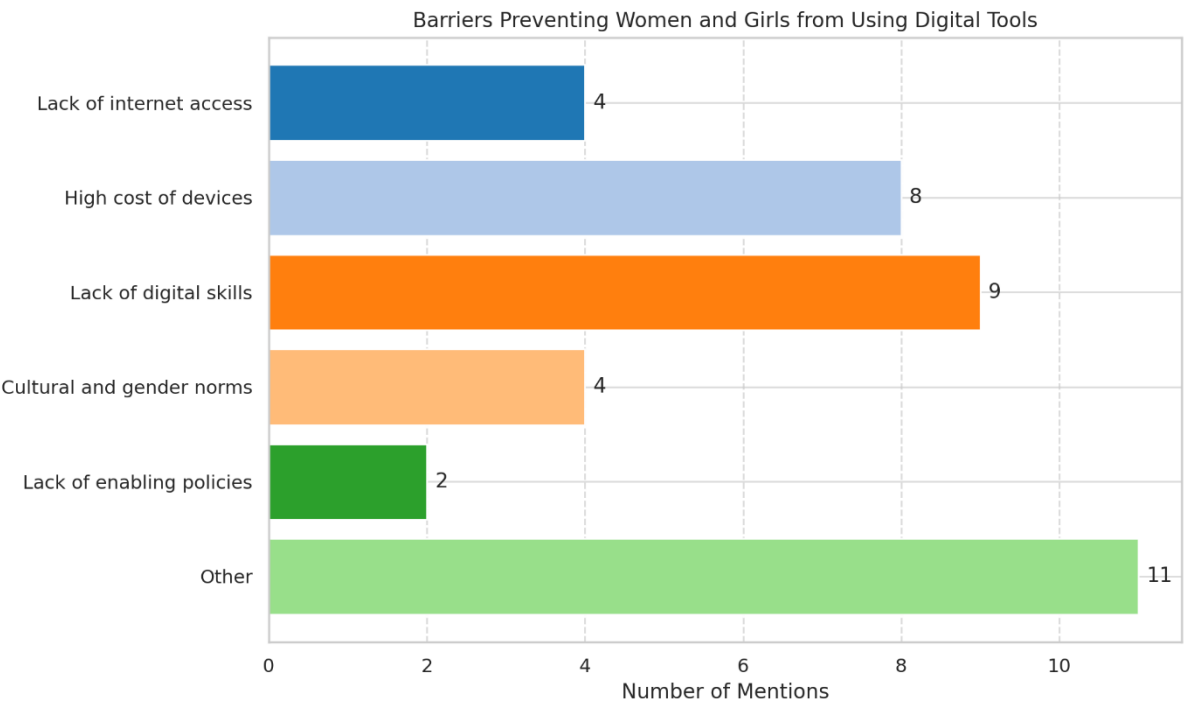
Key Key Informant Interviews (KIIs) with district-level officers, including those from production, agriculture, fisheries, and community development provided a grounded understanding of how digital engagement varies across Eastern Uganda. The picture that emerged was not uniform; it reflected a digital landscape shaped by exposure, infrastructure, and culture.

In Bugweri, officials described a growing interest in mobile-based platforms, particularly among youth and enterprising women. Tools like WhatsApp, Facebook Marketplace, and mobile money platforms are increasingly used for market access, input sourcing, and price negotiation. In contrast, officials in Mayuge and parts of Iganga shared that digital uptake among women entrepreneurs remains low. Access to smartphones is limited, and connectivity challenges persist. Several officers spoke of women who depend on borrowed phones or intermediaries—usually male relatives or traders—to access digital services, often at the cost of autonomy, privacy, or accuracy. In such settings, what passes for digital inclusion is often filtered through others.

Informants were clear that the digital gap is not simply about who has a device; it's about who is allowed to use it meaningfully. Where infrastructure and training exist, momentum is building. Where they don't, exclusion remains deeply entrenched.

## 4.2 Gender-Specific Barriers to Digital Access

From all four districts, one theme stood out, women face layered and persistent barriers in accessing and meaningfully using digital tools. These barriers are not incidental; they are structural, cultural, and economic. Although survey data pointed to gaps in device access and confidence levels, KIIs revealed how these are compounded by community narratives and gender norms. Beyond the commonly cited challenges of cost, access, and skills, key informants revealed deeper, context-specific barriers that continue to prevent women and girls from embracing digital tools. Many women perceive smartphones as a luxury or associate them with immorality, especially in conservative communities where owning a smartphone is stigmatized. In some cases, women deliberately hand over their phone numbers to male spouses or use phones only for political chatter and radio streaming missing out on business potential due to lack of awareness or confidence.



Several informants highlighted that some women, especially those with minimal formal education or operating traditional, small-scale businesses, simply do not see digital tools as necessary. Others choose to prioritize immediate business needs—like restocking inventory—over purchasing data bundles or devices. There is also a persistent fear of breaking the phone or being mocked for misusing it.

Importantly, some women are restricted by male household members who discourage or outright forbid ownership and use of digital devices, reinforcing a culture of dependence and digital silence. Even among those with the means, the absence of mentorship, relatable success stories, and trust in the value of digital tools keeps them from making the leap. These narratives underline the need for any digital inclusion strategy to go beyond infrastructure and skills. It must address mindsets, social gatekeeping, and deeply rooted gender norms through community-led dialogue, confidence-building, and women-centered peer learning.

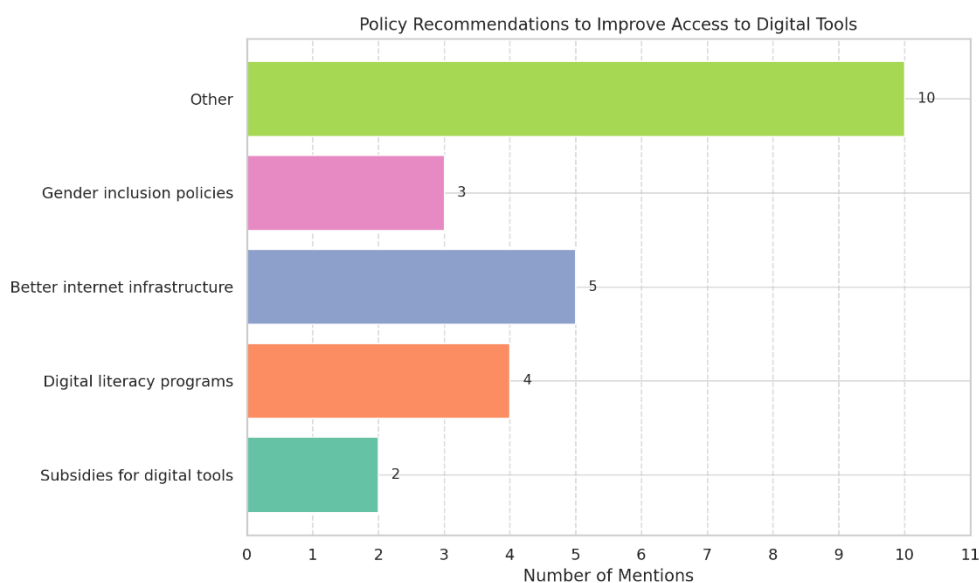
Building digital pathways for women-led green businesses will require more than equipment and training. It must also include deliberate efforts to shift norms, share decision-making power within households, and invest in trust-building mechanisms that protect and empower women online.



### 4.3 Policy Recommendations to Improve Digital Access for Women-Led Green Enterprises

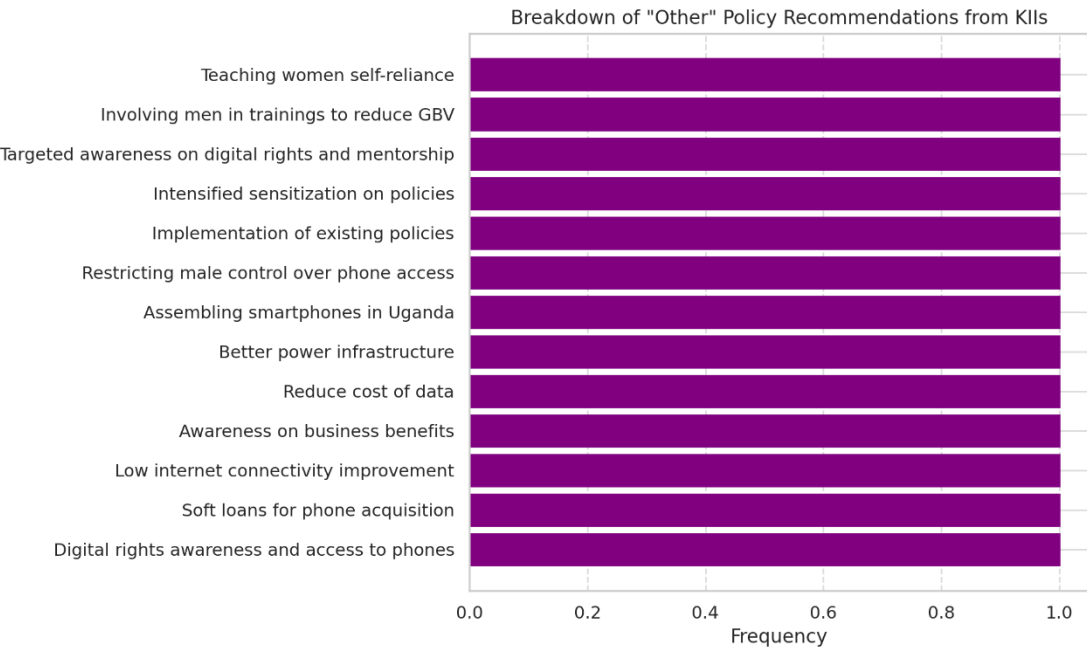
Participants highlighted a range of policy interventions and community-level initiatives that could help bridge the digital divide for women-led green businesses. These suggestions centered on both structural improvements and social behavior change. A strong majority advocated for subsidies on digital tools especially smartphones and basic business hardware to reduce the cost barrier that prevents many women from accessing devices. Similarly, digital literacy programs were consistently flagged as critical. Many felt that if digital tools could be demystified and linked directly to income opportunities, adoption rates would rise significantly.

Improving internet infrastructure, particularly in rural and peri-urban areas, was a recurring priority. Many communities still face low network coverage or unreliable internet connections, making even basic online access difficult and expensive. Some suggested local manufacturing or assembly of smartphones to make them more affordable.



inclusion policies were another core theme, especially those aimed at raising awareness of women’s digital rights. Respondents noted that while policies exist on paper, they are rarely localized or enforced in communities. A rights-based approach—ensuring women can safely own and use digital tools without fear of stigma or domestic conflict—was seen as essential.

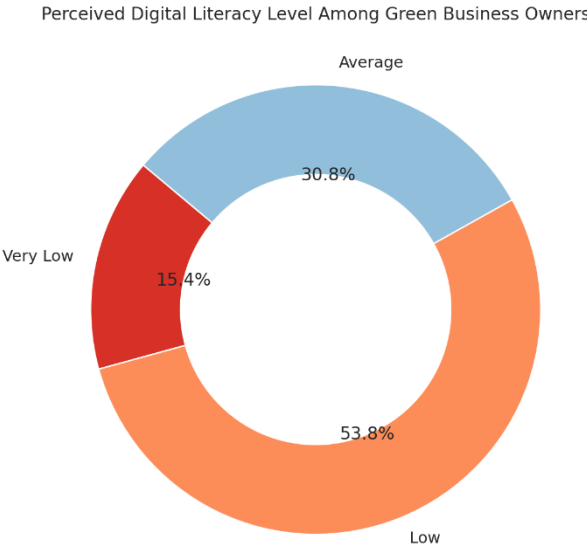
From the “Other” responses, participants offered nuanced ideas. These included soft loans for phone acquisition, community sensitization on digital rights, and involving both men and women in training to avoid backlash and promote household buy-in. One recurring suggestion was to embed digital education into broader empowerment programs, where women not only learn how to use tools but understand their value in building resilient businesses.



Ultimately, respondents called for bundled interventions combining infrastructure, affordability, policy awareness, and social norm change to create an enabling ecosystem where digital tools are not just available, but truly accessible to women.

4.4 level of digital literacy among green-business.

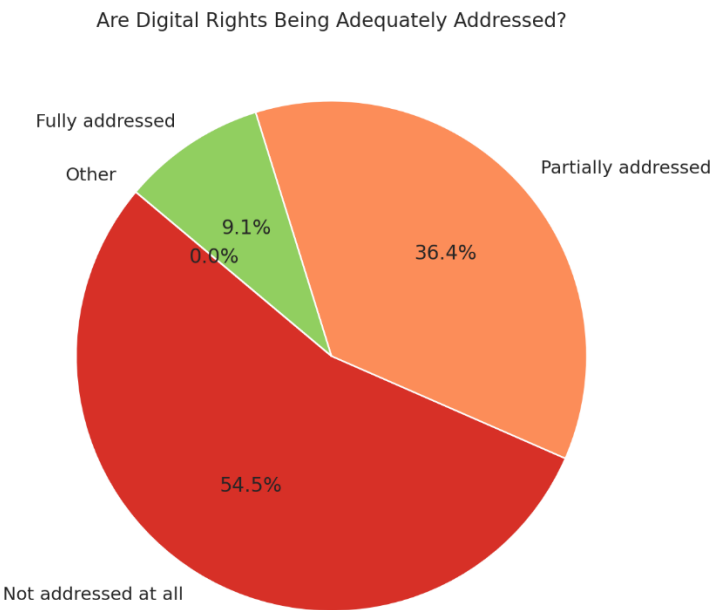
Most key informants and participants described the digital literacy of women-led green business owners as low to very low, citing limited understanding of digital tools beyond basic phone usage. Repeated mentions of “low” and “very low” suggest a widespread gap in digital confidence and skill, particularly around business applications like marketing, record keeping, or mobile finance.



Only a few described it as “average,” indicating that even among those with some exposure, depth of knowledge remains shallow. This aligns with survey data that also showed over 85% of women had never received formal digital training—highlighting a critical need for structured capacity-building programs.

### 4.5 Are Digital Rights Being Addressed?

Across the study districts, there was a widespread perception that digital rights are not being adequately addressed. The majority of key informants and community voices indicated that awareness of digital rights is either nonexistent or extremely limited. Many respondents noted that even when incidents of digital exploitation or abuse occur such as the unauthorized sharing of explicit images—there is little understanding of how to seek redress or which protections exist under the law.



Only a handful of informants believed digital rights were partially addressed, often pointing to isolated trainings or government campaigns. These efforts, however, were described as fragmented and lacking in reach. A few mentioned initiatives by organizations like URA to digitize services or offer basic support, but these were exceptions rather than the norm.

Importantly, the “Other” responses revealed deeper issues—ranging from misconceptions about what digital rights entail, to limited enforcement mechanisms, to cultural attitudes that discourage open digital engagement, especially among women. Some informants suggested that in rural areas, digital rights remain an abstract concept, disconnected from everyday realities.

### 4.6 Role of Stakeholders in Advancing Digital Inclusion

Informants emphasized the importance of multi-actor collaboration where government, NGOs, media, and community leaders all have specific roles in creating an enabling digital environment for women-led green businesses.

- Government: Improve internet and power infrastructure, develop enabling policies, and subsidize digital tools.
- NGOs: Offer gender-responsive digital literacy training and bundle digital tools with empowerment programs.
- Media: Tell relatable stories of women succeeding in digital agriculture to inspire and normalize tech use.
- Local leaders: Shift norms by publicly supporting women’s digital participation and addressing backlash or GBV risks.

---

They stressed the need for targeted rather than generic interventions. As one youth advocate put it: “Don’t teach digital tools in general. Teach women how to market pigs online. Teach them how to calculate feed costs on a phone.”

The takeaway is clear: inclusive digital development requires contextualized skilling, cultural change, and stakeholder accountability.

## 4.7 Support Required to Strengthen Digital Tool Usage

Informants pointed to five primary forms of support urgently needed by green and small business owners:

- Digital Skills Training: Foundational for confident tool use and currently lacking for 86% of respondents.
- Provision of Equipment: Especially smartphones for women and rural entrepreneurs.
- Access to Financing: Soft loans or subsidies to help businesses invest in tech without risking core operations.
- Market Linkages: Digital tools must lead somewhere; access to e-commerce or agri-market platforms is essential.
- Mindset and Mentorship: As one woman stated: “Teach us how phones grow money, not just how they work.”

The most effective interventions will bundle these supports. Skills alone are not enough if tools are unavailable. Markets will not matter if women are kept offline by stigma or gatekeeping. Financing must accompany learning, and mentorship must follow training.



# 5. Emerging Issues and Community Voices

## 5.1 Qualitative Perspectives.

Across the four districts, the voices of women, youth, and district-level stakeholders uncovered a profound mismatch between digital innovation narratives and the lived realities of rural entrepreneurs. The surveys in Mayuge and Iganga revealed that while many had heard of digital tools, few could confidently navigate them. In one, a woman admitted, “I fear spoiling the phone so I only use it to receive calls.”

Participants emphasized a gap not only in skills but in confidence, community support, and perceived value. Women expressed fear of ridicule if seen using smartphones in public, while men in some surveys defended the practice of controlling phone use in the home. Meanwhile, youth often cited being dismissed as “just playing on phones” even when pursuing business opportunities online.

KIIs added institutional context to these testimonies. Officers explained that even when tools are introduced, support systems like follow-up training or troubleshooting are rarely in place. One official summed it up: “We give them the fishing rod but forget to show them the river.”

These qualitative insights reveal that digital exclusion is rarely about technology alone it is about trust, gender roles, learning environments, and local power dynamics.

## 5.2 Structural, Cultural and Policy-Level Reflections

The baseline study surfaced multiple structural barriers that disproportionately affect women and youth in agri-business. These include:

- Inadequate infrastructure: Poor internet and electricity access remains a major deterrent, especially in remote zones.
- Limited financing models: Few affordable options exist for women to acquire devices or data packages.
- Weak policy implementation: Even where digital inclusion or ICT policies exist, district-level actors often lack awareness or capacity to roll them out.
- Cultural resistance: Patriarchal norms were consistently reported where male family members control access to devices, and women face backlash for using digital platforms.

Perhaps most alarmingly, several respondents noted that even local bylaws do not protect women’s digital autonomy. Rather than a rights-based framework, digital inclusion is often treated as a privilege one that must be “earned” through compliance with social norms.

### 5.3 Youth and Gender Dynamics in Digital Spaces

Young women sit at the intersection of two vulnerable identities: gender and age. They face both the paternalistic control of elders and the societal pressure of conformity. This makes their digital participation especially fraught.

In the survey, some young women shared that they borrow smartphones from boyfriends, not just for business—but for survival in the digital age. Others said they feared being accused of “spoiling themselves” if seen online too often. Meanwhile, young men felt their own struggles were overlooked: “People think if you’re a man and you have a phone, you’re okay. But some of us can’t afford data.”

This interplay of age, gender, and digital perception affects who is seen as a “legitimate” digital actor. The baseline findings suggest a pressing need for youth-centered, gender-transformative digital programming that speaks to identity, safety, and social legitimacy not just access.

# 6. Recommendations

## 6.1 For Government

- Improve digital infrastructure: Prioritize rural broadband access and affordable electricity for underserved areas.
- Subsidize tools and data: Offer device grants or tax exemptions to female-led green and agri-businesses.
- Mainstream digital rights into extension services: Integrate rights-based training into all agricultural and entrepreneurship programs.
- Localize policy enforcement: Support districts to contextualize national ICT and gender policies for rural implementation.

## 6.2 For Civil Society and NGOs

- Bundle training with tools and financing: Ensure digital literacy efforts are supported by access to devices, follow-up mentorship, and soft loans.
- Adopt gender-transformative curricula: Address harmful norms by including men and community leaders in digital inclusion programs.
- Promote storytelling and visibility: Share stories of local women succeeding through digital tools to inspire confidence and normalize tech use.
- Advocate for policy reform: Push for enforceable gender and digital inclusion policies at district and national levels.

## 6.3 For Private Sector and Tech Providers

- Develop low-bandwidth tools: Design apps and platforms optimized for limited connectivity and low-literacy users.
- Offer rural-friendly pricing models: Introduce zero-rated services or bundled data offers targeting small businesses and female entrepreneurs.
- Collaborate on digital skilling: Partner with NGOs and government to deliver localized training that meets real business needs.

## 6.4 For Local Leaders and Community Actors

- Champion women's digital rights: Use community platforms to openly support women's ownership and use of technology.
- Address harmful norms: Integrate digital access into broader conversations on empowerment, family decision-making, and education.
- Create safe digital spaces: Support community-driven solutions to digital safety, including peer support networks and reporting channels.
- Lead by example: Equip and train local leaders themselves to model positive digital practices.

# 7. Conclusions

The CIPESA baseline study reveals a digital transformation landscape marked by promise, but riddled with inequality. While mobile phones and digital platforms are slowly integrating into green and agri-business ecosystems, adoption remains highly uneven. Women, youth, and rural entrepreneurs continue to face layered barriers ranging from low skills and high costs to deep-rooted gender norms and policy blind spots. Digital rights, though increasingly relevant, remain misunderstood or ignored in local discourse. Training programs exist but rarely align with lived needs. Infrastructure investments are happening, but without community involvement, their reach is limited.

The findings suggest that meaningful digital inclusion cannot rely on access alone. It must be anchored in rights, relationships, and relevance. It must engage women not as beneficiaries but as digital citizens with agency, creativity, and ambition.

# Appendices

## Appendix A: Survey Tool

---

### Survey Introduction:

Thank you for participating in this survey. The goal of this survey is to understand the use of digital tools and digital rights literacy among small agri-businesses in Mayuge, Bugiri, Bugweri, and Iganga. Your answers will help us understand the challenges and opportunities for women and girls in these communities to use digital tools for business growth. Please answer all questions honestly. Your responses will remain confidential.

### Section 1: Demographics

1. Name of Respondent (optional): \_\_\_\_\_

2. Gender:

- ☐ Male
- ☐ Female
- ☐ Other

3. Age: \_\_\_\_\_

4. District:

- ☐ Mayuge
- ☐ Bugiri
- ☐ Bugweri
- ☐ Iganga

5. Type of Business (select all that apply):

- ☐ Crop farming
- ☐ Livestock
- ☐ Green-preneurship (e.g., eco-friendly products)
- ☐ Other (please specify): \_\_\_\_\_

6. How many people work in your business?

- ☐ 1-3
- ☐ 4-10
- ☐ 11-20
- ☐ More than 20

### Section 2: Digital Tool Usage

7. Do you use any digital tools for your business?

- ☐ Yes
- ☐ No

8. Which digital tools do you currently use in your business? (Select all that apply)

- ☐ Mobile phone
- ☐ Computer
- ☐ Social media (e.g., Facebook, Instagram)
- ☐ Accounting software
- ☐ Mobile money apps
- ☐ Other (please specify): \_\_\_\_\_

9. How often do you use digital tools for your business?

- ☐ Daily
- ☐ Weekly
- ☐ Monthly
- ☐ Rarely
- ☐ Never

10. What do you primarily use digital tools for in your business? (Select all that apply)

- ☐ Marketing
- ☐ Sales
- ☐ Record-keeping
- ☐ Communication with customers
- ☐ Financial management
- ☐ Other (please specify): \_\_\_\_\_

### **Section 3: Barriers to Digital Tool Adoption**

11. What challenges do you face in using digital tools for your business? (Select all that apply)

- ☐ Lack of internet access
- ☐ Lack of digital skills
- ☐ High cost of digital tools
- ☐ No access to technical support
- ☐ Cultural barriers (e.g., lack of support from family or community)
- ☐ Other (please specify): \_\_\_\_\_

12. Have you received any formal or informal training on using digital tools for business?

- ☐ Yes
- ☐ No

13. What type of training would you need to better use digital tools in your business?

- ☐ Digital marketing
- ☐ Mobile money and banking usage
- ☐ Accounting software training
- ☐ Social media use for business
- ☐ Other (please specify): \_\_\_\_\_

14. How would you rate your overall digital literacy (skills in using digital tools)?

- ☐ Very high
- ☐ High
- ☐ Average
- ☐ Low
- ☐ Very low

# Appendix B: Key Informant Interview (KII) Guide

Thank you for participating in this interview. We are conducting a baseline study to understand the barriers and opportunities related to digital tool adoption and digital rights literacy for small and medium green-businesses, particularly for women and girls, in the Busoga region. Your insights as a key stakeholder will be valuable for shaping future interventions.

1. Please tell us about your role and experience with digital tools or technology in the context of small green-businesses in this region.

---

---

2. In your opinion, what are the main barriers preventing women and girls in this area from using digital tools for their businesses?  
(Probe for issues like access to internet, affordability of technology, cultural or social barriers, etc.)

---

---

3. What policies or initiatives do you think could help improve access to digital tools for women and small and medium green-businesses in the Busoga region?

---

---

4. How would you describe the level of digital literacy among small and medium green-business owners in this region? Do you think digital rights are being adequately addressed?

---

---

5. Are there any gender-specific challenges that affect women’s ability to adopt digital tools for business? What solutions would you suggest to address these?

---

---

6. What role do you think local government and other stakeholders (e.g., NGOs, community organizations) should play in promoting digital tool usage among small and medium green-business owners?

---

---

7. What kinds of support do you think are necessary for small and medium green-businesses, especially those led by women, to effectively use digital tools and improve their business operations?

---

---

8. What advice would you give to organizations looking to implement digital rights and tool adoption programs in rural areas?

---

---

---

## Appendix C: Kobo Links

<https://ee-eu.kobotoolbox.org/x/5VSGx8Pr>





