PROGRESS

Promoting Green Deal Readiness in the Eastern Partnership Countries

On behalf of:

Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety

of the Federal Republic of Germany

IKI INTERNATIONAL CLIMATE INITIATIVE

Assessing the Capacity Needs of Farmers and Agribusiness Enterprises to Access Financing for Sustainable Agricultural Investments in the European Union Eastern Partnership Countries

Azerbaijan Report

January 2026

EUROPEAN BUSINESS ASSOCIATION EBA MOLDOVA ASOCIAȚIA BUSINESSULUI EUROPEAN

giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

OECD

REC CAUCASUS

Published within the framework of the regional project PROGRESS – Promoting Green Deal Readiness in the Eastern Partnership Countries

Consortium Members:
• European Business Association (EBA) Moldova
• Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH (Consortium Lead)
• Institute for Economics and Forecasting of the National Academy of Sciences of Ukraine (IEF)
• Organisation for Economic Co-operation and Development (OECD)
• Regional Environmental Centre for the Caucasus (REC Caucasus)

Consortium Lead Registered office:
Bonn and Eschborn, Germany

Address:
Deutsche Gesellschaft für
Internationale Zusammenarbeit (GIZ) GmbH
42 Rustaveli Ave. / 31a Griboedov Str.
0108 Tbilisi, Georgia

E martina.kolb@giz.de
I www.giz.de/en

The project 'Promoting Green Deal Readiness in the Eastern Partnership Countries' (PROGRESS) is implemented on behalf of the International Climate Initiative (IKI) of the Federal Government of Germany. Within the Federal Government, the IKI is anchored in the Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN). Selected project is also the responsibility of the Federal Foreign Office (AA). PROGRESS is implemented by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, as the lead agency, in partnership with the Organisation for Economic Co-operation and Development (OECD), the Regional Environmental Centre for the Caucasus (REC), the European Business Association (EBA) Moldova and the Institute for Economics and Forecasting of the National Academy of Sciences of Ukraine (IEF).

Author/Responsible/Editor, etc.:

German Sparkassenstiftung Azerbaijan team

German Sparkassenstiftung Georgia team

Policy and Management Consulting Group

PMCG Research

The Authors would like to express their gratitude for valuable contributions and excellent cooperation to: Samir Abbasov, Project Manager, GIZ Azerbaijan, Krzysztof Michalak, Senior Programme Manager, OECD and Nelly Petkova, OECD.

URL:
This report contains links to external websites. The responsibility for the content of the listed external sites always lies with their respective publishers. When the links to these sites were first posted, consortium checked the third-party content to establish whether it could give rise to civil or criminal liability. However, the constant review of the links to external sites cannot be reasonably expected without concrete indication of a violation of rights. If consortium itself becomes aware of or is notified by a third party that an external site that it has provided a link to gives a rise to civil or criminal liability, it will remove the link to this site immediately. Consortium expressly dissociates itself from such content.

On behalf of

The German Federal Ministry for Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)

The consortium implementing PROGRESS is responsible for the content of this publication.

Table of Contents

ABBREVIATIONS

AKIA – The State Agency for Agricultural Credits under the Ministry of Agriculture of the Republic of Azerbaijan

AMFA – Azerbaijan Micro-Finance Association

AZN – Azerbaijani manat

BDF – Business Development Fund

BMUV – German Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection

CNA – Capacity Needs Assessment

DSIK – German Sparkassenstiftung for International Cooperation

EaP countries - Eastern Partnership countries

EBA – European Business Association

EBRD – European Bank for Reconstruction and Development

EU – European Union

EUR – Euro

FGD – Focus Group Discussions

GIZ – German Agency for International Cooperation

IEF – Institute for Economics and Forecasting

IKI – International Climate Initiative

JSC – Joint Stock Company

KII – Key Informant Interview

LTD – Limited Liability Company

OECD – Organisation for Economic Cooperation and Development

OJSC – Open Joint Stock Company

PCGF – Partial Credit Guarantee Fund

PROGRESS – Promoting Green Deal Readiness in the Eastern Partnership Countries

RECC – Regional Environmental Centre for Caucasus

UCO – Universal Credit Organization

INTRODUCTION TO CAPACITY NEEDS ASSESSMENT

This study, Assessing Capacity Needs of Farmers and Agribusiness Enterprises, was conducted within the framework of the project "Promoting Green Deal Readiness in Eastern Partnership Countries" (PROGRESS). The goal of the capacity needs assessment (CNA) is to examine the challenges and opportunities farmers and agribusiness owners face in Armenia, Azerbaijan, Georgia, and Ukraine in terms of accessing finance for sustainable agricultural development, with a particular focus on climate-resilient investment.

PROGRESS is a regional initiative covering the five EU Eastern Partnership (EaP) countries - Armenia, Azerbaijan, Georgia, Moldova, and Ukraine. The project supports these countries in achieving long-term mitigation, adaptation, and sustainable development consistent with the EU Green Deal objectives and the 1.5°C pathways of the Paris Agreement. A particular emphasis is placed on horticulture, alongside efforts to enhance the competitiveness and trade opportunities of the fruit and berries sectors from the EaP region in EU markets.

The project 'Promoting Green Deal Readiness in the Eastern Partnership Countries' (PROGRESS) is implemented on behalf of the International Climate Initiative (IKI) of the Federal Government of Germany. Within the Federal Government, the IKI is anchored in the Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN). Selected project is also the responsibility of the Federal Foreign Office (AA). PROGRESS is implemented by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, as the lead agency, in partnership with the Organisation for Economic Co-operation and Development (OECD), the Regional Environmental Centre for the Caucasus (REC), the European Business Association (EBA) Moldova and the Institute for Economics and Forecasting of the National Academy of Sciences of Ukraine (IEF).

In line with its overarching purpose, this capacity needs assessment pursues three key objectives which are 1) assessment of the financial knowledge and literacy levels amongst small farmers and agribusinesses; 2) identification of the gaps preventing above mentioned target group from accessing finance for climate-resilient investments; 3) provision of a basis for designing targeted capacity-building initiatives tailored to these groups.

By addressing these objectives, the assessment seeks to contribute to stronger, more sustainable agricultural systems in the Eastern Partnership region and to ensure that farmers and agribusiness entrepreneurs are better equipped to access finance, adapt to climate risks, and seize new market opportunities.

EXECUTIVE SUMMARY

The main goal of the assignment is to assess the capacity needs of farmers and agribusiness owners in EU Eastern Partnership countries (Armenia, Azerbaijan, Georgia, and Ukraine) in terms of access to finances for sustainable agricultural development. In accordance with the goal, the following objectives were outlined for the study:

- Assess the financial knowledge and literacy levels of small farmers and agribusinesses.
- Identify gaps preventing them from accessing finance for climate-resilient investments.
- Provide a basis for developing targeted capacity building for these target groups

The target group of the study includes small and medium-sized farm and agribusiness enterprise owners, men and women, as well as representatives of financial institutions in each target country.

Across the four countries, the study involved 17 focus group discussions (FGDs) with 104 farmers and agribusiness owners, of whom 50 were women (48%). The FGDs were conducted online and included participants from more than 30 regions, ensuring a geographically diverse sample. Armenia contributed 4 FGDs with 27 participants, Azerbaijan - 4 with 30 participants, Georgia - 5 with 26 participants, and Ukraine 4 as well with 21 participants.

Moreover, 10 key informant interviews (KIIs) were carried out with financial institutions, which included major banks, microfinance institutions, and agricultural credit unions actively engaged in agricultural finance; in particular: 2 KIIs in Armenia with Farm Credit Armenia UCO (Universal Credit Organization) and ACBA Bank OJSC; 2 in Azerbaijan with Azerbaijan Micro-Finance Association (AMFA) and Unibank, 2 in Georgia with JSC TBC Bank and JSC Microbank Crystal, and 4 in Ukraine with JSC Creditwest Bank Ukraine, JSC Oschadbank, the Business Development Fund (BDF), and The Partial Credit Guarantee Fund in Agriculture (PCGF).

Participants represented a wide range of agricultural sectors, most prominently horticulture, vegetables, fruits, berries, nuts, beekeeping, animal husbandry, grain production, and small-scale processing. Across countries the majority were micro- and small-scale farmers employing between 1 and 10 workers, with annual turnover most commonly ranging from €1,500 to €10,000. A significant share of participants operated informally, while others were registered as individual entrepreneurs, LLCs, or cooperatives. Association membership varied by country but remained modest overall, with Ukraine showing the highest engagement.

The sample captured both female and male farmers, new entrants and experienced operators, as well as smallholders and medium-sized agribusinesses, providing a comprehensive picture of financial literacy levels, climate-awareness, and access-to-finance challenges across the region.

Despite differences in country contexts and the varying scope of issues explored in each assessment, farmers and agri-entrepreneurs across all four countries report broadly similar types of constraints that limit their ability to access finance, adopt climate-resilient practices, and expand their agricultural

activities; however, given the qualitative nature of the study, the severity of these challenges cannot be directly compared between countries.

Budgeting and record-keeping among smallholder farmers remain major cross-country gaps, as they tend to rely on informal and compliance-driven bookkeeping practices used mainly for preparing loan applications or grant proposals. As a result, their creditworthiness is often weak, creating significant barriers to access formal finance. In contrast, medium and more established farms typically employ professional accountants, use specialized accounting programs, maintain structured reporting systems, and rely on these insights to guide their farming activities.

Although awareness of state and donor programs is generally high, particularly in Georgia and Ukraine, farmers often rely on family members, acquaintances, or paid consultants to prepare grant proposals. Individuals with prior experience in such programs tend to achieve higher success rates, whereas those applying for the first time frequently lack the information and skills required to submit competitive applications.

In all four countries, farmers express satisfaction with subsidized state loan programs, which significantly reduce interest rates and make borrowing more accessible. Without these subsidies, interest rates become prohibitively high for many farmers, especially smallholders. Farmers also emphasize that bank lending practices are highly risk-averse, with procedures that do not sufficiently account for the long investment cycles typical of horticulture, beekeeping, and other agricultural sectors. As a result, newly established and small-scale farmers face the greatest obstacles in obtaining credit, while medium and larger farms with long-standing banking relationships experience fewer difficulties.

Gender-related barriers are recognized to varying degrees across the four countries, with notably lower acknowledgment in Azerbaijan. A common pattern nevertheless emerges while women often benefit from donor and state-funded grant programs targeting female entrepreneurship, they remain relatively disadvantaged in accessing bank loans. This disadvantage is shaped by cultural stereotypes, gender roles, lower levels of property ownership, and difficulties demonstrating financial stability. Some banks in the region offer specialized programs for women farmers and entrepreneurs, which helps to narrow the gender gap, although these initiatives vary in availability and effectiveness across countries.

Climate change is perceived across all four countries as an increasingly severe and unpredictable threat. Farmers report experiencing more frequent frost, drought, extreme heat, irregular rainfall, and emerging diseases and pests, all of which reduce yields and increase expenditures. The effects are described as worsening year by year, and farmers often feel unprepared and under-resourced to respond. While some medium-sized farms have adopted irrigation systems, renewable energy solutions, or other adaptive technologies, smallholders remain limited by high costs, low awareness, and lack of technical expertise. Awareness of climate-related financial products and subsidies is consistently low across all countries. In Ukraine, climate impacts are further exacerbated by wartime destruction, water scarcity following major infrastructure damage.

Financial institutions across the region are at varying stages of integrating climate-related considerations into their lending portfolios. Ukrainian banks, often supported by international donors, are the most

advanced in offering financing for irrigation, renewable energy, and energy-efficient machinery, reflecting both increased demand and stronger donor engagement. In Georgia, Armenia, and Azerbaijan, dedicated climate finance products are less developed, although banks occasionally integrate environmental assessments into subsidized loan programs.

Across all four countries, farmers express a strong interest in capacity-building initiatives, particularly those that are practical, hands-on, and tailored to their specific sector and region. Participants consistently emphasized the importance of learning through demonstration farms, peer exchange, and applied workshops rather than theoretical training. They also highlight the need for support with bookkeeping, budgeting, project proposal preparation, and understanding climate-smart technologies.

The recommendations developed across the four countries focus on improving farmers' financial literacy, strengthening practical training on climate-smart technologies, and expanding access to finances for women and smallholders. On the financial sector side, recommendations emphasize the need for more flexible collateral requirements, loan products that reflect long agricultural investment cycles, gender-responsive financing, and dedicated instruments for climate adaptation. While many recommendations are shared across all countries due to common structural challenges, several are tailored to specific contexts and aim to create a more resilient, inclusive, and climate-responsive agricultural finance ecosystem.

1. ASSESSMENT METHODOLOGY, CRITERIA, AND PROCESS IN AZERBAIJAN

The study applied qualitative research methods to gather in-depth insights on access to finance for sustainable agriculture in Azerbaijan.

Data collection and analysis

Focus Group Discussions (FGDs) and Key Informant Interviews (KIIs) were conducted. In total, 4 FGDs were held with 30 farmers and agribusiness entrepreneurs, exploring gaps and needs in sustainable agricultural development and assessing participants' openness to potential interventions. FGDs were organized online via Zoom and WhatsApp to accommodate participants' availability and included farmers and agribusiness entrepreneurs from various sectors, regions, ages, and gender with women making up 54% of participants.

2 KIIs were conducted with representatives of local financial organizations (Azerbaijan Micro-Finance Association[1] (AMFA) and Unibank), focusing on lending challenges, clients' financial literacy, and awareness of climate-related financing options.

All FGDs and KIIs were recorded, transcribed, and systematically coded using MaxQDA[2] 2024 to ensure an in-depth analysis without loss of relevant information.

Ethical considerations

Data collection followed high ethical standards to protect participants' rights and safety. Informed verbal consent was obtained before each FGD and KII, with clear explanations of the study's purpose, voluntary participation, the right to withdraw, and confidentiality. Data were securely stored and findings are reported in aggregate form to prevent identification of individuals.

2. DEMOGRAPHIC CHARACTERISTICS OF FOCUS GROUP PARTICIPANTS

The total number of focus group participants amounted to 30 people, representing diverse demographic groups and various segments of Azerbaijan's agricultural sector.

In terms of gender representation, the focus groups maintained a good balance between male and female farmers and agri-entrepreneurs, with representation of 16 female (53.3%) and 14 male 46.7% participants (see Figure 1).

[1] Non-profit organization.

[2] A software used in qualitative analysis and it ensure an in-depth and systematic analysis of qualitative data without losing relevant information.

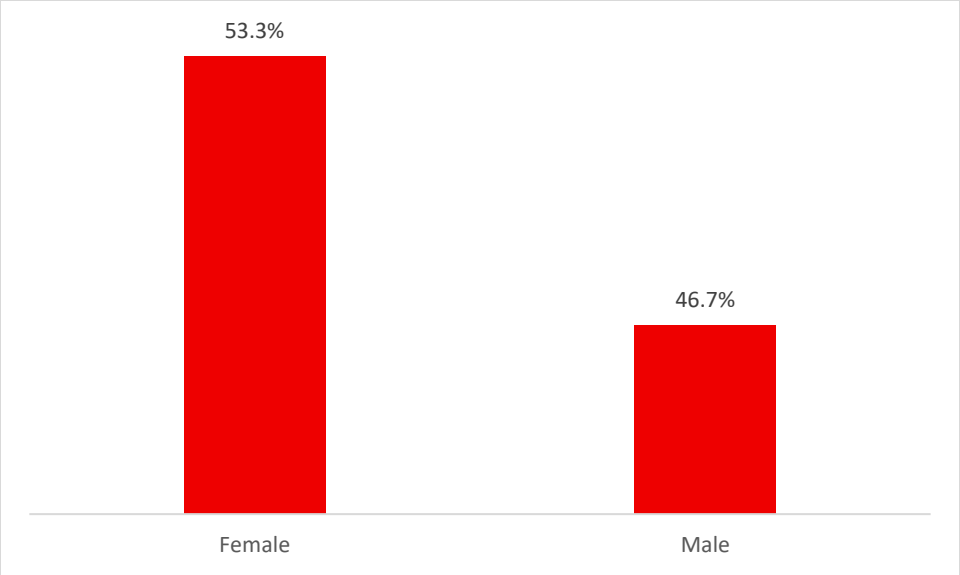

Figure 1: Gender distribution among FGD participants

The majority of participants were aged 35–44 (40%), followed by 25–34 and 45–54 age groups (20% each). Smaller shares were between 55–60 (3.3%) and 61+ (16.7%) (see Figure 2).

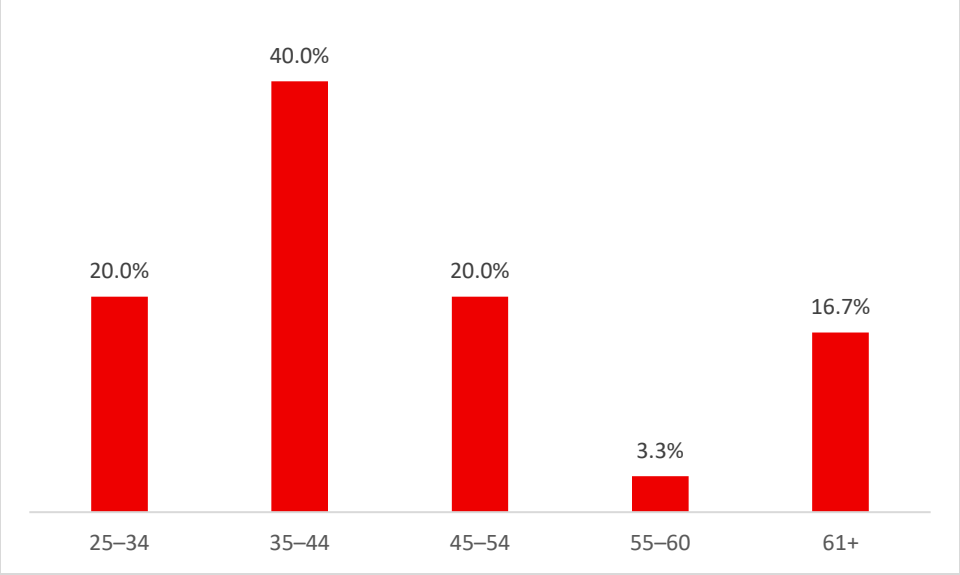

Figure 2: Distribution of age groups among participants.

FGD participants represented 14 regions across Azerbaijan, with the highest concentration from Lankaran (26.7%), followed by Zagatala (20%) and Gadabay (10%) (see Figure 3).

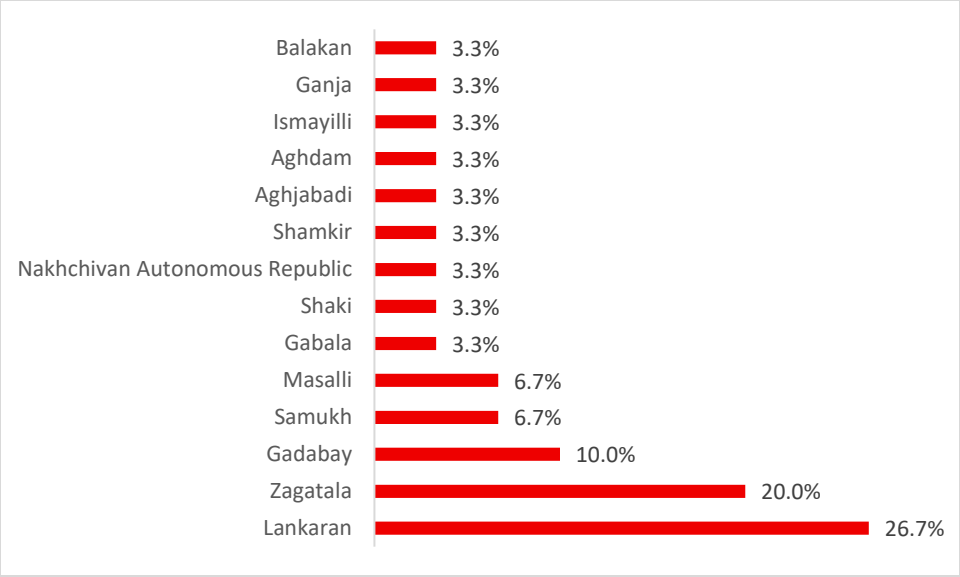

Figure 3: Regional distribution among FGD participants[3].

FGD participants represented a diverse range of sectors, with the largest share engaged in horticultural activities including: vegetable, grain, and fruit production, which together accounted for more than 46% of all participants (see Figure 4).

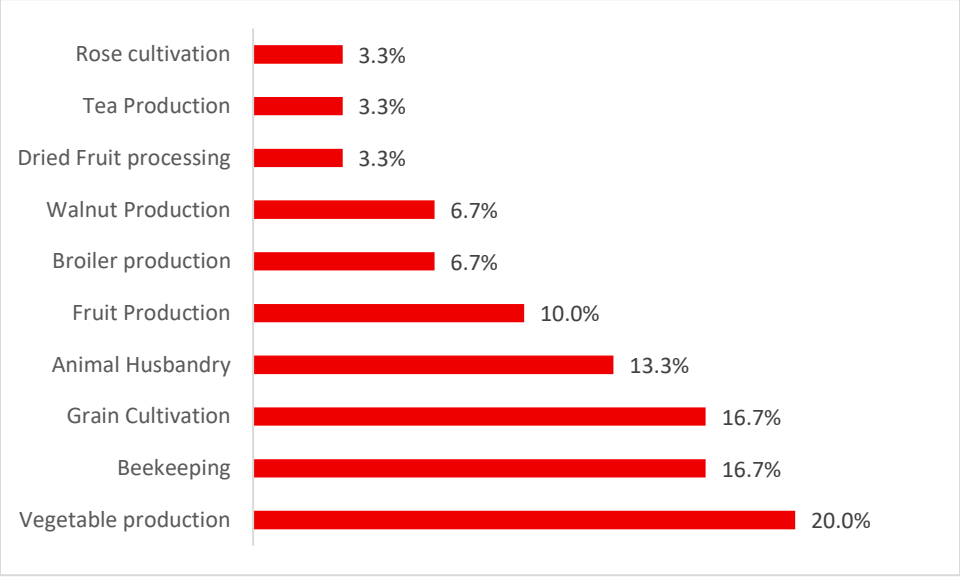

Figure 4: Sectoral distribution among FGD participants[4]

87% of FGD participants indicated that they operate their activities as individual entrepreneurs, while 13% reported being organized as cooperatives for their farming or agri-entrepreneurship activities.

[3] Percentages may not total exactly 100% due to rounding.
[4] Percentages may not total exactly 100% due to rounding.

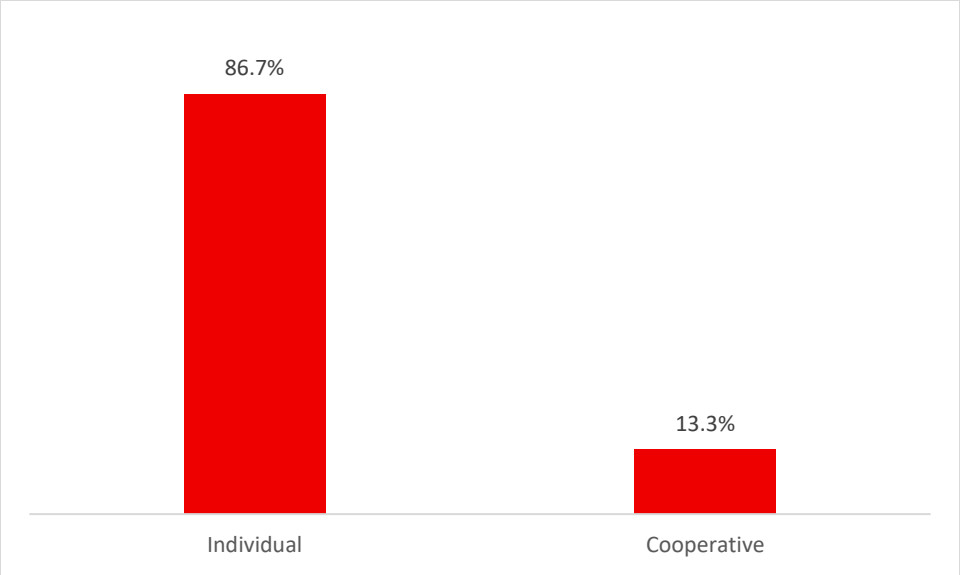

Figure 5: Distribution of FGD participants by legal status

Most of the participants (43.3%) indicated that they were single-person operations, while 36.7% reported employing 2–5 people. Another 20% of participants operated with 6–20 employees (see Figure 6).

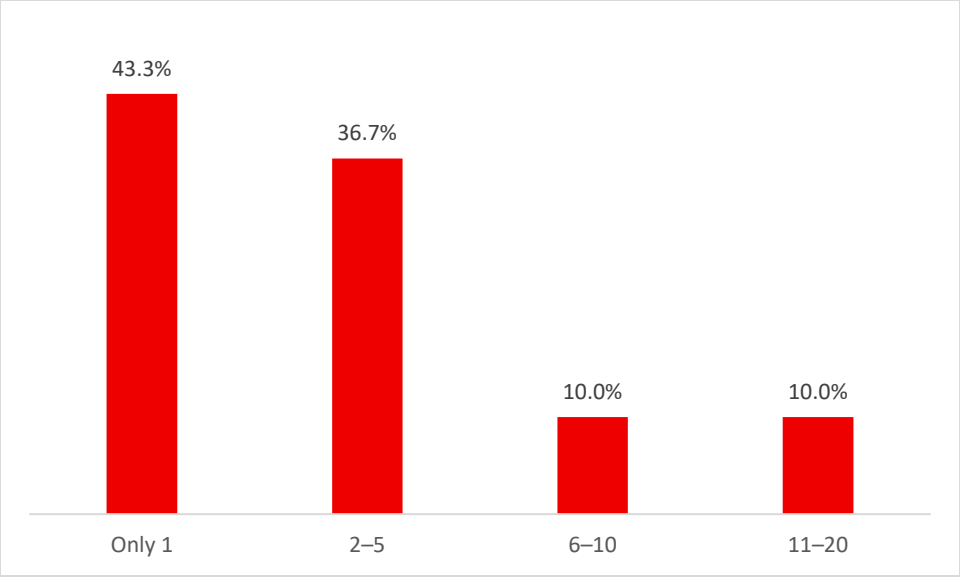

Figure 6: Distribution of the number of employees within farms and enterprises among FGD participants

Reported annual turnover levels varied widely among participants, though most (40%) fell within the 1,500–10,000 EUR range, and 33.3% reported earnings below 1,500 EUR. About 23.3% of participants indicated annual turnover between 10,001 and 35,000 EUR, while only 3.3% reported higher income levels ranging from 80,001 to 160,000 EUR (see Figure 7).

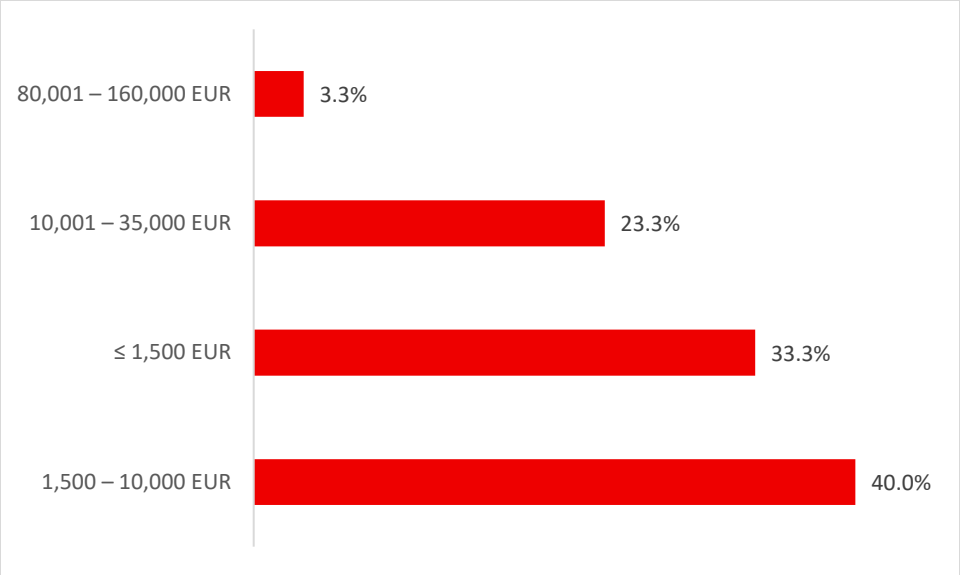

Figure 7: Distribution of annual turnover within farms and enterprises among FGD participants[5].

Just over one-third (36.7%) of FGD participants reported being members of associations or clusters, while the majority (63.3%) had no membership, suggesting limited formal networking or institutional engagement among participants (see Figure 8).

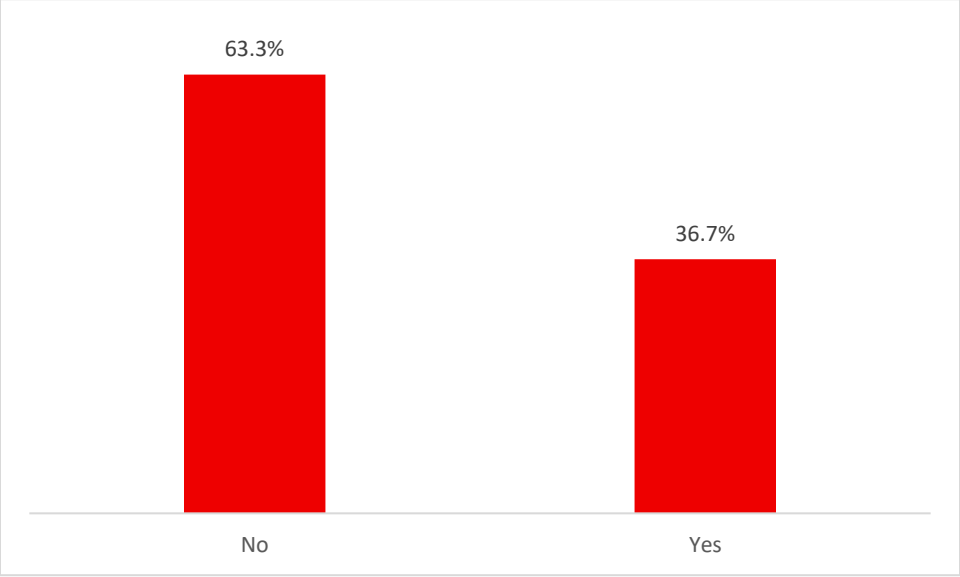

Figure 8: Distribution of association/cluster membership among FGD participants

[5] Percentages may not total exactly 100% due to rounding.

3. FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

3.1. FINDINGS

3.1.1. Financial Literacy

The majority of participants of the FGDs indicated that they keep some form of record of their agri-entrepreneurship of farm-related income and expenditures. However, in the case of smallholder farmers and owners of family-run agricultural enterprises, such record-keeping tends to be carried out in an informal manner. These records are usually maintained in personal notebooks or simply remembered mentally, rather than through any structured system or digital tool. The use of software programs for financial tracking was extremely limited among these groups; only in a few instances did participants mention using Microsoft Excel to document their financial activities.

"I run a small business, and I handle everything myself. I still keep my records by hand, and I'm the one who takes care of all the finances - every little detail." (Grain Cultivation, Female)

I keep track of my financial details both by hand and electronically in Excel, but I mostly do it by hand. (Dried Food Processing, Male)

Medium-sized farmers with higher turnover often employ paid professionals or accountants to manage their financial records, although this practice is not universal. Several participants from this group also noted that they rely on insights derived from bookkeeping and financial analysis to guide decisions related to reinvestment and the expansion of their operations. Such strategic approach to record-keeping was not observed among smallholder farmers, who tend to focus primarily on day-to-day financial tracking rather than long-term planning.

The bank representative noted during the KII that smallholder farmers often struggle to adopt new technologies and apply them in their daily activities. This challenge also affects their ability to use digital tools for budgeting and financial management.

"They find it really hard to adapt to modern technologies and use digital systems. Things like receiving payments to their accounts or understanding SMS notifications are confusing for them. The only exceptions are larger producers and business owners - they tend to be more educated and tech-savvy." (Unibank)

3.1.2. Access to Finance

A moderate level of awareness was observed among FGD participants regarding grant opportunities. Several farmers, particularly smallholders, mentioned that they lacked adequate information about available programs and the specific procedures required to apply. Interestingly, participants who were better informed about these opportunities tended to be more proactive, with many having participated in two or more grant programs.

In terms of the application process, farmers and agri-entrepreneurs generally perceived it as relatively easy to navigate. Nevertheless, most participants acknowledged seeking assistance from family members,

friends, or paid professionals to prepare the necessary documentation. Overall, they expressed a high level of satisfaction with the programs that provided either direct financial support or essential equipment for their operations. Reported grievances were minor and primarily related to the protracted duration of grant disbursement and the increased number of awardees, which some participants felt reduced the individual benefits received.

"I applied to many projects and received several grants. Our cooperative was actually founded thanks to those grants. We also took part in a project supported by the U.S. Embassy, and through that program, we acquired a water pump." (Vegetable Production, Female)

I applied for grant programs 3 times. I contacted a specialist who helped me prepare and fill out the documents, as there were some forms that needed to be completed. (Grain Cultivation, Male)

Utilization of bank loans among farmers and agri-enterprnours was generally limited. Many participants, especially those managing small or family-run farms, had never applied for a loan due to insufficient information, limited financial literacy, or fear of indebtedness. Several explained that their business scale did not justify borrowing, while others worried about their ability to meet repayment obligations. Religious beliefs also influenced attitudes in rare cases, with two participants describing borrowing as incompatible with their values[6].

I haven't applied to take loans from banks, because of religious reasons, I see it as sinful. I think that if I have money, I'll invest it in my work, and if I don't - I just won't borrow. (Sadit)

"I've never applied for a loan. I started my business after receiving a grant. I began with 17 acres, and now I have 1 hectare. I don't want to apply for loans because I'm afraid of the risks - that something might go wrong and I won't be able to pay it back." (Rose Cultivation, Male)

Among those interested in obtaining bank loans, FGD revealed mixed experiences. Some farmers described persistent barriers that limited their access to formal credit. The most common challenges included high interest rates and the need for collateral or guarantors. It was also noted that it's generally easier to get loans when you work in state entities, as banks tend to trust them more.

A smaller group had access to subsidized or low-interest agricultural loans and considered them fair and manageable. Their positive experiences were often linked to cooperation with state agencies under the Ministry of Agriculture. KIIs also confirmed that AKIA[7] loans are generally the most accessible and favorable for farmers. These loans are offered through banks as part of government-supported programs, with banks acting as intermediaries responsible for processing and disbursement. However, due to occasional procedural delays in AKIA loan processing, some farmers still prefer to apply directly for standard bank loans. A few farmers with medium-sized farms or agribusiness activities stated that even

[6] https://www.ecnmy.org/engage/paying-interest-on-your-loans-in-islam-you-shouldnt-have-to/.
[7] The State Agency for Agricultural Credits under the Ministry of Agriculture of the Republic of Azerbaijan.

with unfavorable interest rates, they plan to continue using bank credit because it is essential for expanding their operations

"I think that cooperating with banks is essential for business development. Personally, I don't have any issues with the interest rate - I believe it's impossible to expand a business without taking a loan." (Animal Husbandry, Male)

"I've reached out to the bank several times and haven't had any problems. [..] The interest rates weren't an issue for me, but once, the bank asked for collateral worth 200,000 AZN - I think that's an unreasonably high amount." (Fruit Production, Male)

In terms of debt management, farmers who had direct experience with loans reported meeting repayment obligations without major difficulty. Borrowers tended to rely on income from other activities or careful budgeting to maintain timely repayment. However, a few noted that unpredictable weather and market fluctuations could affect repayment capacity, reinforcing their cautious approach toward borrowing.

Participants generally agreed that the procedural aspects of loan applications were not overly complex and described their interactions with banks as seamless and positive. Many noted that bank staff were supportive and often assisted in preparing the required documentation. However, a few participants expressed concerns about the lengthy loan approval processes, noting that such delays could discourage them from applying for loans in the future.

"Getting a loan always comes with a lot of difficulties. [...] one of the biggest problems is how long it takes to issue them and prepare all the documents - sometimes the season ends before the loan is finalized" (Grain Cultivation Male)

FGDs revealed that participants largely believe women and men have equal opportunities in accessing financial resources. This perception is rooted in the absence of any legal discrimination related to gender, as both men and women are subject to the same requirements when applying for bank loans or grant programs. Participants consistently emphasized that loan approval and grant selection depend on financial documentation, credit history, and the strength of business plans rather than gender of the applicant.

"There's no gender inequality in the country - as long as your documents and requirements are in order, you shouldn't face any problems." (Vegetable Production, Male)

"I think there aren't really any differences in this regard in Azerbaijan. We applied to a bank, but we didn't like the high interest rate, so we couldn't cooperate. The main issue here is really about the percentage, and it affects both women and men equally." (Vegetable Production, Female)

The same notion was supported by KIIs. The bank representative explained that the institution applies identical standards and procedures for both male and female clients. On the other hand, the AMFA representative noted that Finca Bank Azerbaijan offers a product specifically designed for female farmers and agribusiness owners. In addition, considerable number of microfinance institutions operating in

Azerbaijan have set specific performance targets focused on female entrepreneurs and business owners, which are likely to have a positive effect on women's access to financial resources. FGD participants on the other hand were generally unaware of these products of initiatives.

Interestingly, some female participants acknowledged certain practical challenges that women may face in establishing themselves in agriculture and agri-entrepreneurship. They outlined that these challenges are not directly linked to unequal access to finance but rather to broader social and experiential factors, such as limited exposure to business practices, lower confidence, or restricted opportunities to gain experience in farm management. In rare cases women stressed the importance of solidarity and mutual encouragement among themselves in overcoming these barriers.

"I think the problem often lies in women's lack of experience and their fear of taking risks. Many women are afraid of failure, but I believe this fear is unfounded - we have every opportunity to be successful in agriculture." (Beekeeping, Female)

"We should support each other - if we do, neither lack of education nor social pressure will stop us." (Vegetable Production, Female)

Several women, participating in FGD also mentioned being members of cooperatives composed exclusively of women, which they viewed as an important source of empowerment and shared learning. Participants expressed interest in programs that highlight successful women in agriculture and promote cooperation among female farmers as a means to further increase women's participation in the sector nationwide. Interestingly, some also emphasized the need for additional financial support specifically targeting women in agriculture. These suggestions were generally supported by both male and female participants.

3.1.3. Challenges in Financing Climate-Resilient Investments

Farmers across the FGDs describe experiencing climate change as a serious and growing threat to their livelihoods. They report that unpredictable weather patterns: particularly droughts, extreme heat, and heavy rains have significantly reduced crop yields and harmed productivity. Many note that these shifts have damaged soil and water conditions, caused pest outbreaks, and led to lower product quality. As a result, they face financial losses and growing uncertainty about the future of their work.

"Global changes are definitely affecting the harvest. For example, this year we had terrible problems with insects - they nearly destroyed my crops. I sprayed three times, but it still didn't have much effect. It's like nothing really worked. I also think the drought made things even worse, drying out the soil and weakening the plants. Altogether, it's been a really tough year for farming." (Grain Cultivation, Male)

"Every season I face different problems. In summer, it gets extremely hot, and in winter, there's too much rain. Now almost all my animals are sick, and some have already died." (Animal Husbandry, Male)

FGD participants largely expect climate-related challenges to intensify in the coming years. They expressed deep frustration and powerlessness, feeling that these environmental changes are beyond their

control and steadily undermining their livelihoods. Although most have attempted to adopt some form of mitigation strategy, they report that these measures often fail to deliver lasting results.

"Even though we actively try to deal with the problems, our work is still very difficult. We treat our bees, but because of other people's carelessness, they get sick again, and we have to start all over. Often, other farmers' mistakes affect us too. We also move our bees to different places." (Beekeeping, Female)

"I disinfect often, but there's no real effect - I just don't know what else to do anymore." (Grain Cultivation, Female)

Farmers and agri-entrepreneurs noted that individual actions are insufficient against large-scale environmental shifts and emphasized the need for broader, systemic solutions rather than isolated efforts. For this reason, many highlighted the importance of government involvement and, in some cases, collective action through cooperatives to better address these challenges.

A smaller group of farmers demonstrated greater confidence and adaptability. They actively apply mitigation and adaptation strategies that have shown more tangible results, such as improved water management, efficient irrigation systems, etc. They report that these efforts are informed by consultations with agronomists or veterinarians, or by personal research conducted on social media. However, they noted that a key challenge remains that these adaptation measures significantly increase their expenditures.

Although KIIs mentioned that banks in the country have implemented or are currently implementing subsidized programs supported by the state or international donors to promote climate-resilient financing, FGD participants were generally unaware of these initiatives. A portion of participants had some knowledge of general state agricultural subsidies that support farmers in various areas, though these are not specifically focused on climate change risk adaptation. Even for those broader programs, awareness was moderate, as many farmers had limited information or did not fully understand the eligibility requirements for participation.

"Over the past years, we've partnered with donors and international financial institutions to expand lending for MSMEs, low-income households, and climate finance projects. For instance, in 2024, the IFC provided $20 million in local currency financing to Bank Respublika to improve access to finance for small businesses and vulnerable households, and to support climate-related initiatives across Azerbaijan." (AMFA)

Farmers generally doubt that there are effective measures or practical knowledge they could gain about climate change and adaptation strategies through training. However, they noted that if truly useful programs were offered, they would be interested in participating. Participants agreed that such trainings must be of high quality to capture their interest. They generally preferred in-person, practice-oriented formats that allow for hands-on learning and direct interaction with trainers and peers. While some favored online sessions for convenience, most found face-to-face trainings more engaging. Several also suggested combining offline workshops with study visits or master classes abroad to observe practical examples and gain new skills.

Farmers and agri-entrepreneurs expressed a strong interest in training in marketing, sales, and branding skills. Many participants highlighted the need to learn how to promote their products effectively, reach new customers, and use tools like social media and digital marketing to expand their businesses. Interestingly, a common challenge outlined by agri-entrepreneurs during the discussions was the difficulty of obtaining licenses, which limits their ability to sell their products legally and expand their businesses.

3.1.4. Opportunities and Associated Needs

Demand side (Farmers and agri-entrepreneurs)

- Farmers highlighted strong interest in accessing low-interest loans and reduced collateral requirements as these loans are needed both to expand their activities and to finance adaptation to new technologies and strategies in response to climate change.
- Some farmers require loan options that align with their religious beliefs, allowing them to expand their operations without conflicting with their values.
- Farmers require simpler procedures, greater support, and faster processing to obtain loans more easily and efficiently.
- An increasing number of farmers need to adopt more climate-resilient strategies to reduce climate-related risks and make their activities more sustainable, including the establishment of technologies and practices such as drip irrigation, cooling systems, and other adaptive solutions.

Supply Side (Financial institutions[8])

- Bank officers often assist individual farmers in preparing the necessary financial documentation and loan applications, helping to reduce the administrative burden on clients.
- Banks offer subsidized, lower-interest agricultural loans through state-supported programs, providing more affordable financing option.
- Banks have introduced subsidized programs and partnerships with international institutions to expand climate-resilient financing.

3.2. CONCLUSIONS

The following conclusions synthesize the main insights from the research, outlining key behavioral patterns, challenges, and opportunities identified among farmers, agribusinesses, and financial institutions. They represent an interpretation of the collected data and reflect broader implications for agricultural development and support programs.

- Most farmers and agribusiness entrepreneurs keep records of their income and expenses; however, among smallholders, this is usually done informally or verbally. Only medium-sized farmers tend to use more formal methods such as Excel spreadsheets or professional accounting services.
- Medium-sized farmers demonstrate a greater understanding of financial management and decision-making based on recorded data, while smallholders focus mainly on day-to-day transactions without long-term planning.

[8] The supply-side analysis reflects insights from the banks with which KIIs were conducted and does not represent a comprehensive assessment of the entire financial market in Azerbaijan.

- Utilization of bank loans remains limited overall, as many smallholders rely primarily on grants, personal savings, or informal borrowing. High interest rates, collateral requirements, and fear of indebtedness are among the most common deterrents.
- In rare cases, reluctance to take loans was linked to religious beliefs that prohibit interest-based borrowing. This tendency was not widespread but occasionally influenced financial decisions.
- Differences in awareness of grant opportunities affected farmers' participation, with some having successfully applied multiple times, while others remained unaware of available programs or lacked the necessary skills to prepare proposals independently.
- Both male and female participants believed that men and women have equal access to financial resources and that there are no major challenges for women in this area. However, to some extent, they acknowledged the need for additional support mechanisms to encourage greater participation of women in agriculture.
- While most farmers and agri-entrepreneurs experience climate change negatively, only a minority feel equipped with the necessary knowledge and tools to mitigate these risks.
- Financial institutions confirmed the existence of subsidized or donor-supported programs for climate-resilient financing; however, farmers were largely unaware of these opportunities, revealing a significant communication gap.
- Farmers and agribusiness owners showed a strong preference for in-person, practice-oriented training formats, potentially combined with study visits or demonstrations.
- Many agri-entrepreneurs reported challenges in obtaining licenses to legally sell their products, which restricts their ability to expand operations and access broader markets.
- Marketing, branding, and digital promotion skills were frequently mentioned as priority areas for future training by farmers and agri-entrepreneurs.

3.3. RECOMMENDATIONS

Based on the findings and conclusions of this assessment, the following actions are recommended to strengthen farmers' and agribusinesses' ability to access sustainable finance and build resilience to climate-related challenges. The recommendations are structured in two parts: those targeting the demand side, focusing on farmers and capacity-strengthening actors, and those addressing the supply side, which includes financial institutions providing agricultural finances.

Recommendations for supporting farmers' needs

- Provide targeted support for women farmers through grants and expand women's empowerment programs to raise awareness of gender-related issues including: invisible barriers[9] limiting women's access to finance and entrepreneurship opportunities.

- Support women farmers and agri-entrepreneurs through dedicated financial products, targeted loan schemes, and grant programs to enhance their access to finances.
- Strengthen dissemination information regarding climate-resilience financing and subsidy programs, through national and local media and digital platforms to ensure broader regional

[9] https://www.cgap.org/research/publication/invisible-barriers-how-gender-norms-impact-financial-inclusion?utm_source=chatgpt.com.

coverage. Outreach should be adjusted to include smallholders and family-owned farmers who may lack access to digital channels.

- Promote peer-to-peer learning and the role of agricultural cooperatives in disseminating information about financing opportunities, climate-resilient practices, and success stories from local farmers.
- Design capacity-building programs focused on practical, hands-on training in climate change adaptation and sustainable farming, as well as marketing, branding, and digital promotion to enhance farmers' resilience and competitiveness across different regions.
- Provide technical assistance and guidance to agri- entrepreneurs in obtaining licenses and meeting regulatory requirements for selling their products.

Recommendations to strengthen capacity of financial institutions

- Collaborate with banks and microfinancing institutions to promote gender-sensitive programs aimed at increasing women's access to finances.
- Implement capacity-building programs for bank staff to enhance their understanding of gender dynamics, including the subtle and structural barriers that hinder women's access to finance.
- Improve public communication and outreach strategies to raise awareness of available financial products and ensure they reach underserved farming communities.
- Introduce alternative financing mechanisms, such as Islamic-compliant loan products, for farmers who avoid conventional loans due to religious beliefs.

Implementing these recommendations would help create a more inclusive and climate-resilient agricultural finance ecosystem in Azerbaijan, strengthening the capacity of both farmers and financial institutions to engage in sustainable investment practices.

4. COMPARATIVE ANALYSIS

4.1. INTRODUCTION

This comparative analysis examines the evolution of capacity needs among farmers and agribusinesses in Azerbaijan drawing on two key assessments conducted in 2022 and 2025 by German Sparkassenstiftung for International Cooperation (DSIK). Namely:

- Technical Needs Assessment, 2022
- Assessing the Capacity Needs of Farmers and Agribusiness Enterprises to Access Financing for Sustainable Agricultural Investments, 2025.

While both studies investigate the obstacles faced by farmers and agribusinesses in accessing finance, their thematic emphasis and analytical depth diverge in multiple ways. The 2022 assessment concentrates primarily on foundational business challenges - such as limited financial literacy, weak management practices, marketing gaps, and constrained access to conventional financing. Its findings reveal a

landscape where smallholders and micro-enterprises struggle with basic record-keeping, low profitability, and minimal strategic planning, resulting in limited capacity to engage with formal financial institutions or expand their operations.

By contrast, the 2025 assessment extends the analysis into more complex and emerging dimensions of agricultural development, particularly climate-resilient investment needs, sustainable finance mechanisms, and gender-responsive support structures. It highlights not only persistent gaps in financial capability but also escalating climate pressures, low awareness of climate-focused subsidy and loan programs, and the underutilization of climate-adaptive technologies.

Together, the two studies illustrate a clear evolution in sectoral priorities - from addressing essential financial management deficits to confronting more advanced challenges tied to climate adaptation, sustainability, and the integration of green finance into agricultural systems.

4.2. KEY COMPARATIVE FINDINGS

4.2.1. Financial Literacy, Record Keeping, and Management

Between 2022 and 2025, financial literacy among micro, small, and medium agricultural enterprises shows only modest progress. In 2022, most producers operated with little to no formal bookkeeping, relying instead on memory or simple notes. Their understanding of budgeting, profitability, and long-term planning was limited, which meant that financial decisions were often made reactively and driven by immediate pressure rather than informed analysis.

By 2025, the situation has improved slightly. More farmers are at least keeping some form of records, though these remain mostly informal for smallholders. Medium-sized farmers, however, are beginning to adopt structured tools such as Excel or professional accounting support. This shift highlights a growing divide: while larger producers advance toward more sophisticated financial management, smallholders remain constrained by low digital literacy and limited access to modern tools.

Key Insight: Financial management capacity is improving, with medium-sized farmers leading the way - though smallholders still need targeted support to build on this progress.

4.2.2. Access to Finance

Between 2022 and 2025, access to finance for micro and small enterprises remained constrained, though the landscape grew more layered. In 2022, low profitability, insufficient collateral, and weak financial documentation limited eligibility for loans. These structural constraints were compounded by mistrust of financial institutions, fear of rejection, and low awareness of available products. As a result, many enterprises opted for grants or donor-funded programs, which felt safer and easier to navigate.

By 2025, the fundamental barriers had not shifted significantly. High interest rates, collateral requirements, and limited product knowledge continued to discourage borrowing. However, new factors

emerged that added depth to these constraints: loan processing delays eroded confidence, religious concerns shaped attitudes toward interest-based lending, and awareness of emerging opportunities - such as climate finance - remained strikingly low. While banks made efforts to provide more guidance and introduce subsidized products, these improvements did not fully translate into better-informed or more confident borrowers.

Key Insight: Foundational barriers persist, but new procedural, cultural, and informational gaps surface in 2025.

4.2.3. Business and Entrepreneurial Knowledge

The 2022 study highlighted major gaps in marketing, branding, and sales, along with limited understanding of diversification, value addition, and business growth. Many farmers had little exposure to strong agricultural or business practices, leaving them without the skills needed to expand beyond basic operations.

The 2025 findings reinforce these earlier challenges, noting continued weaknesses in marketing - particularly in digital promotion and accessing new markets. New obstacles also surfaced, including difficulties securing licenses required for legally selling products, which slowed down business formalization. Medium-sized farmers showed signs of stronger strategic planning, while smallholders remained focused on day-to-day survival, widening the developmental gap.

Key Insight: Entrepreneurial weaknesses continue; Regulatory and digital barriers further limit smallholders' ability to move beyond subsistence-level business practices.

4.2.4. Climate Awareness, Risk Management, and Insurance

Between 2022 and 2025, the role of climate risk in agricultural livelihoods shifted markedly. In 2022, farmers recognized climate issues but largely treated them as secondary concerns. Risk management remained weak and informal, with little uptake of insurance, environmental planning, or structured adaptation practices - reflecting both low awareness and limited perceived urgency.

By 2025, climate pressures had escalated sharply. Farmers faced repeated crop losses, pest surges, heat stress, and livestock mortality, making climate impacts an unavoidable part of daily production decisions. Yet, even as climate threats intensified, knowledge of adaptation technologies and climate-resilient financing remained extremely limited.

Many farmers felt ill-equipped to respond and continued relying on expensive, piecemeal coping strategies. Formal risk management systems, especially insurance, remained largely absent, revealing a widening disconnect between the scale of climate risk and the tools available to manage it.

Key Insight: Transition from reactive adaptation to a growing understanding of resilience-based planning. Implementation remains limited by cost and institutional access.Farmers are aware but ill-equipped to respond.

4.2.5. Gender Dynamics and Financial Inclusion

Across both the 2022 and 2025 assessments, women continue to face subtle but persistent barriers in agricultural finance and entrepreneurship, despite legal frameworks that provide equal access to financial services.

While the 2022 study highlights structural disadvantages - such as limited assets, mobility, and business experience - the 2025 assessment reveals a more nuanced picture in which women's lower confidence, restricted exposure to farm management, and fear of risk limit their ability to fully participate in financing opportunities.

Although gender-responsive loan products and women-only cooperatives are emerging and offer promising avenues for empowerment, awareness of these options remains low. Overall, gender inequalities have shifted from primarily structural constraints to more experiential and social barriers, underscoring the need for targeted support.

Key Insight: While structural barriers have eased, women's growing participation is now shaped mainly by experiential and confidence-related gaps as well as social norms.

4.2.6. Institutional and Ecosystem Support

In 2022, coordination among support institutions was weak, trust was low, and information flows were fragmented. Many farmers operated outside formal networks because cooperatives were underdeveloped or inactive, leaving them without reliable channels for learning or support. Existing programs were often perceived as unevenly delivered or difficult to navigate, reinforcing farmers' sense of isolation.

By 2025, the landscape had evolved in meaningful but uneven ways. Farmers reported increased availability of grants and more visible engagement from banks, suggesting a modest improvement in institutional outreach. Yet these efforts remained insufficient for smallholders, who continued to struggle with fragmented information and limited direct contact with service providers. A notable shift was the rise of women's cooperatives, which emerged as valuable platforms for peer learning, confidence-building, and early-stage empowerment, filling some of the gaps left by formal institutions. Still, significant communication challenges persisted, particularly regarding climate subsidies and green finance mechanisms, which remained poorly understood despite their growing importance.

Key Insight: The broader support ecosystem for farmers shows signs of gradual strengthening, though persistent gaps continue to limit its effectiveness.

4.2.7. Training Needs and Learning Approaches

In 2022, demand was concentrated in core areas such as marketing, financial literacy, business planning, and risk management. The preference for practical, hands-on training formats reflected farmers' need for directly applicable skills rather than theoretical instruction.

The 2025 findings indicate that while these foundational needs persist, the training landscape has expanded in response to emerging pressures. Farmers now prioritize in-person learning on climate change adaptation, digital marketing and branding, and understanding licensing and regulatory procedures. Interest has also grown in more advanced and experiential learning formats - field demonstrations, master classes, peer exchanges, and study visits - which are perceived as more effective for mastering complex practices.

Key Insight: Farmers' capacity-building needs show continuity in foundational business skills alongside a clear shift toward more specialized competencies

5. SUMMARY TABLE – TREND DEVELOPMENT ACROSS STUDIES

Dimension	2022	2025	Change
Financial Literacy	Informal, minimal bookkeeping; weak planning;	Slight improvement with more Excel use among medium farmers; smallholders still mostly informal	Slight progress
Access to Finance	Low loan uptake; information gaps; dependence on grants; collateral constraints	High interest rates, collateral burdens, delays; climate finance poorly understood; some religious constraints	Barriers persist but broaden in type
Business and Entrepreneurial Knowledge	Weak marketing, branding, and value-added skills; limited strategic planning	Continued gaps plus new issues: licensing struggles, digital marketing needs	Gaps persist
Climate Awareness	Limited climate awareness; reactive responses; minimal insurance use	High awareness of climate impacts; low preparedness; high perceived vulnerability	Considerable increase in awareness, but limited action
Gender Sensitivity	Gender barriers recognized superficially; limited analysis	Gender-responsive loans exist; women's cooperatives rising; nuanced informal barriers identified	Moderate progress
Training Motivation	Low motivation; limited exposure to structured training	High demand for practical, hands-on training, especially on climate adaptation, marketing, and licensing	Positive change
Risk Preparedness	Very weak	Improved awareness, low action	Moderate progress
Institutional Support	Weak institutional coordination; low cooperative engagement	More grant programs and donor-bank initiatives; women's cooperatives emerging; climate finance messaging still weak	Incremental growth