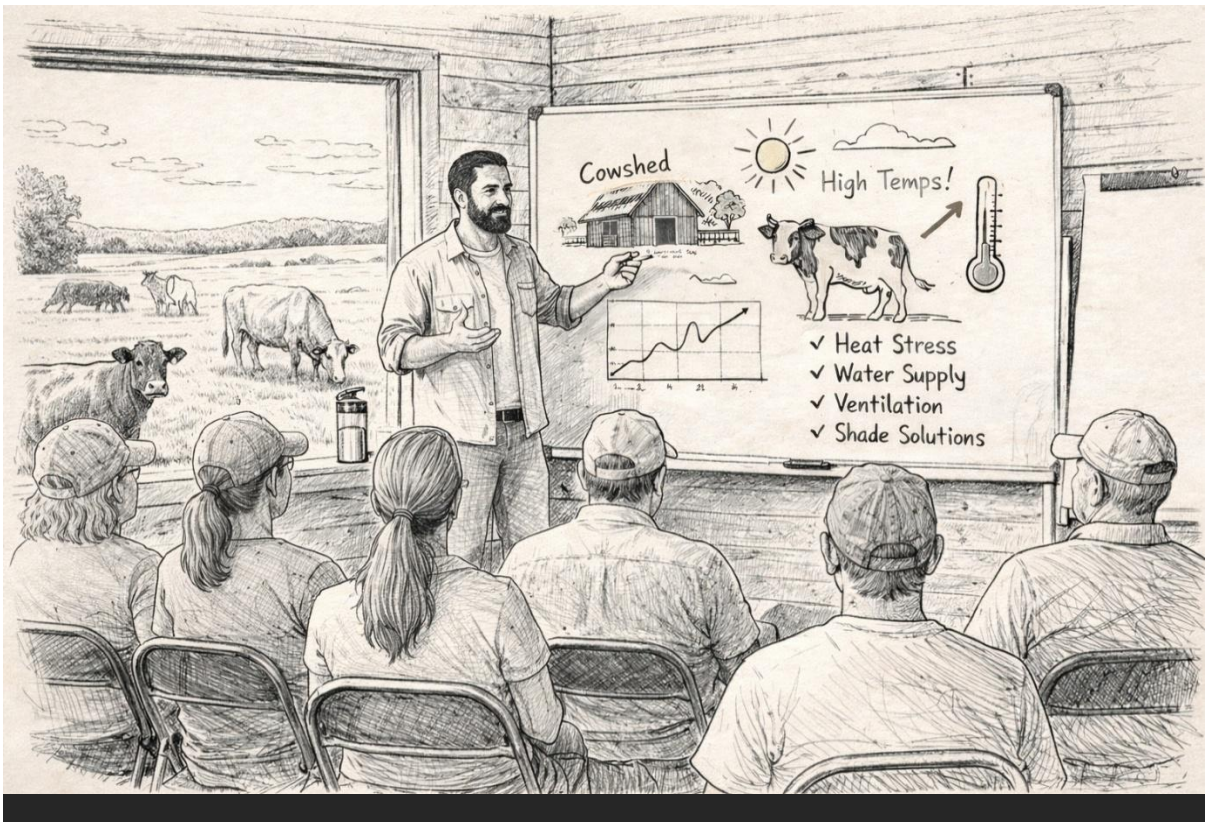

Climate- Smart Extension Impact Assessment

October 2025

ALCP | Alliances Caucasus 2

REGIONAL MARKET ALLIANCES IN THE SOUTH CAUCASUS

Contents

SUMMARY

This study assesses the application and perceived results of climate-smart extension among livestock farmers approximately **one year after training participation**. Based on sixty-five semi-structured interviews, the findings indicate that a majority of respondents, **62 %, have applied the practices or products** introduced during the trainings and report positive early outcomes, particularly in **animal health**, **resilience to climate stress** and **productivity**, with respondents reporting an average **24% increase in both cattle weight gain and milk yield**. The assessment also highlights continued **information sharing** among farmers to approximately **another four people**, and confirms that climate change remains a significant challenge for livestock production, despite perceived improvements in adaptive capacity.

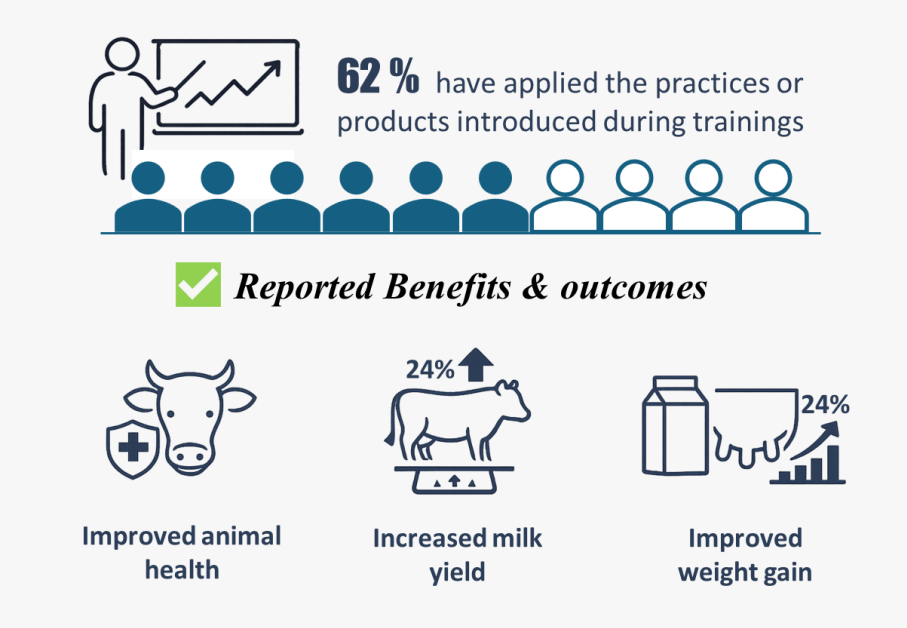

Figure 1. *Impact of the climate-smart extension on farmers in Infographic*

This Climate-Smart Training Impact Assessment is a follow up to the *Mid-Term Assessment of Climate-Smart Extension*, which assessed the initial rollout and farmers' early responses.. This study aims to further examine how training participants have applied the knowledge received through climate-smart extension activities, perceived its usefulness, and its effects on household practices related to animal husbandry and crop production. The assessment also explores farmers' perceptions of climate change and its ongoing influence on their farming activities.

INTRODUCTION

ALCP2 climate extension overview

ALCP2 climate-smart extension intervention targeted three key actors: Roki Ltd a veterinary input supplier operating a nationwide veterinary pharmacy network already heavily invested in training and embedded information, the Rural Development Agency (RDA) who provides extension through its Information Consultation Centres (ICCs) and regional representatives , and the Journalism Resource Centre (JRC) who have strong linkages to rural and regional media outlets and university journalism faculties. Together these actors represent the principal public, private, and information-based channels through which livestock farmers access advice, products, and knowledge in Georgia today.

Over time, climate-smart extension has become embedded within the operating systems of the three. climate-smart extension is now embedded in Roki's commercial advisory and product systems, used by RDA specialists in routine consultations, and integrated into media and university education through JRC reaching hundreds of thousands of farmers..

Roki Ltd has integrated climate adaptation into its core business model, including farmer trainings, veterinary pharmacy-based advisory services, product package design, and digital communication which has reached over **500,000 views**, generated more than **4,000 engagements**, and coincided with a threefold increase in both in-store and online sales. Climate-adaptation content was integrated into Roki's training portfolio on calf rearing, mastitis prevention, and milking equipment use, reaching approximately **3,400 farmers through 2023- 2025** as well as climate specific trainings.

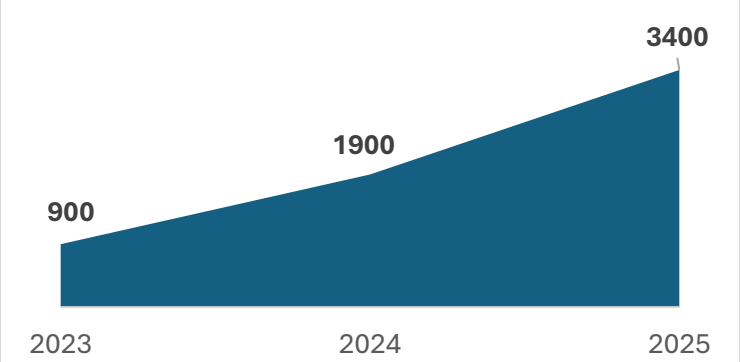

Figure 2. *Farmers exposed to Roki climate smart content through integrated trainings aggregated by years*

The **RDA** has institutionalized the climate-smart Guidelines and distributed them to veterinary and extension specialists across nine regions of Georgia. While formal training sessions beyond the initial facilitated phase have not continued, partly due to reliance on donor funding and changing operational conditions, extension specialists actively use the Guidelines in one-to-one consultations and informal village-level advisory services.

The **Journalism Resource Centre** has integrated climate-smart livestock content into journalist training programmes, rural media reporting, and university modules. Twenty partner media outlets independently produced **61 climate-related reports**, reaching more than **141,000 rural inhabitants**. Universities continue to use the Guidelines to train future journalists and communicators, ensuring the sustainability of this information channel.

What this impact assessment is measuring

Figure 3. *Map of Climate Smart Extension Training Participants by locations*

In addition to broader dissemination, 718 farmers were trained using a standardized climate-focused curriculum supported by systematic baseline and endline data collection. In total, 215 farmers participated in Roki Ltd's dedicated climate-adaptation sessions, and 503 farmers were trained through twelve RDA ICCs.

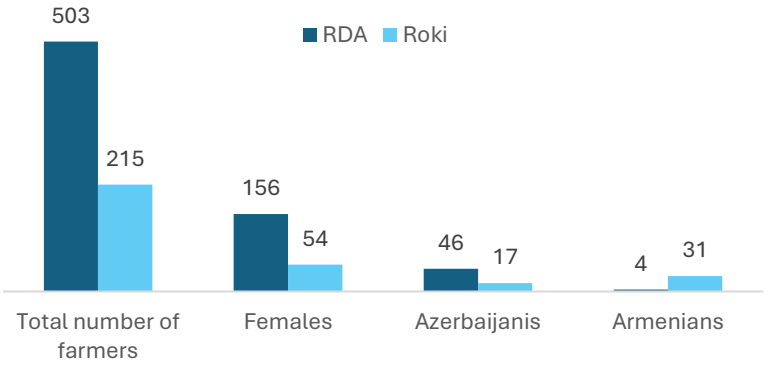

Figure 4. *Total number of beneficiary farmers (718)by gender and ethnicity*

Rigorous impact measurement, therefore, focused on this smaller group that received standardized and closely monitored trainings, completing **pre- and post-training assessments** and **follow-up monitoring approximately one year** following the initial training. It was imperative that the ALCP2 see whether tailored climate adaptation trainings created based on farmer needs[1], addressed these needs and that uptake translated into use, and that use translated into benefit in countering the negative impacts of climate change on production.

[1] Describe initial research here link to report.

METHODOLOGY

A total of sixty-five face-to-face semi-structured interviews were conducted between September and October 2025, approximately one year after the completion of the trainings. Respondents included participants of trainings organized by Roki Ltd (30 respondents) and Momavlis Fermeri/ RDA[2] (26 respondents). Overall, 57% of respondents were men and 43% were women. However, in general gender-disaggregated data showed no significant differences between the responses of men and women, therefore the reported key findings include aggregated data.

Participants were randomly selected from the total group of 718 trained farmers. The sampling strategy aimed to reflect the diversity of the original participant group, considering gender, ethnicity[3], and geographic location. Interviews with thirty- three ethnically Georgian, fourteen - Azerbaijani and seventeen -Armenian population were conducted across twenty- one villages and towns in four regions of Georgia[4].

[2] Seven attended both trainings

[3] Georgian- 33, Azerbaijani- 14, Armenian- 17

[4] Mtskheta Mtianeti (5), Kakheti (10), Kvemo Kartli (24), Samtskhe- Javakheti (26); Villages: Uchmana, Yulari, Zemo Machkhaani, Khornabuji, Gamarjveba, Ninotsminda, Darakovi, Eshtia, Tbisi, Sakdrioni, Mokhe, Prezeti, Adigeni, Kvemo Alvani, Kistauri, Jokolo, Artsivani, Tbeti, Tsalka, Kasumalo.

KEY FINDINGS

Sources of climate- adapted information

Most respondents reported receiving information on climate-adapted practices or products from multiple sources in addition to the knowledge gained from the trainings on the subject mentioned. Among these sources, **veterinary pharmacies** were most frequently mentioned (**86%**), reflecting their central role in disseminating product-related information[5] and the common uptake of products through this channel; Face to face consultation with **RDA ICCs**, **Social media platforms** (Facebook, Youtube, Instagram, etc.) and **Agricultural programmes on TV** were also mentioned.

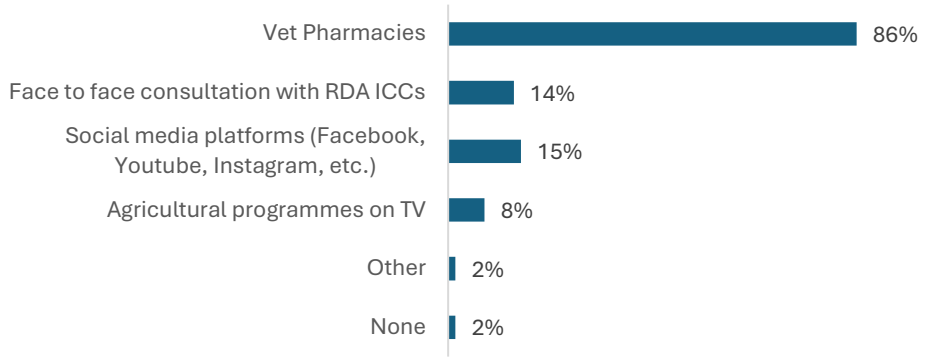

***Figure 5**. Sources of receiving climate adaptive information other than the trainings*

Perceived Climate Challenges and Adaptive Capacity

Overall, **97%** of respondents reported that climate change remains a challenge for their farming activities. When asked to rate how their capacity to adapt livestock production practices to climate-related challenges had changed over recent years, respondents most commonly selected a score of 6 on a scale from 1 (not changed at all) to 10 (improved significantly) indicating a moderate perceived improvement in adaptive capacity, although climate risks continue to affect farming conditions.

[5] In settlements with a high proportion of ethnic minorities, vet pharmacies are the dominant and often the sole source of information for both women and men.

Using New Practices

When asked whether they had used the information or products from the trainings in practice, **62%** (40 respondents) reported that they **had done so**, while **31% plan to do it**. All respondents who applied the practices confirmed that the information or products had been useful for their farms.

Of the 31% of respondents planning to apply the practices in the future. The most commonly cited reason for not yet applying them was limited financial or material resources, such as the inability to invest in cowshed improvements.

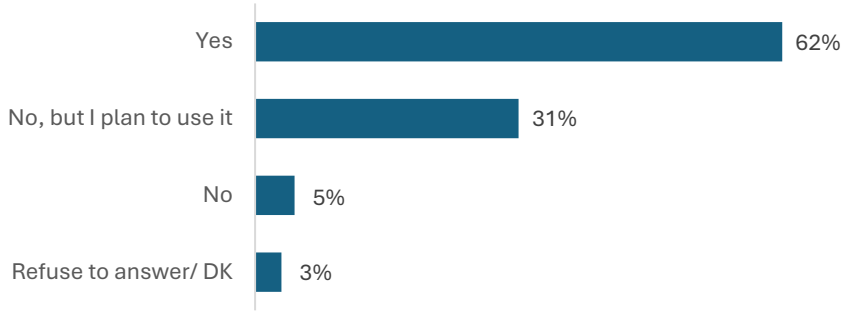

***Figure 6**. Use of information/ products from the training in practice*

When disaggregated by training type, farmers who attended Roki trainings showed a higher likelihood of applying the information or products in practice, probably due to the ready links to the products and embedded advice provided by the company to their customers.

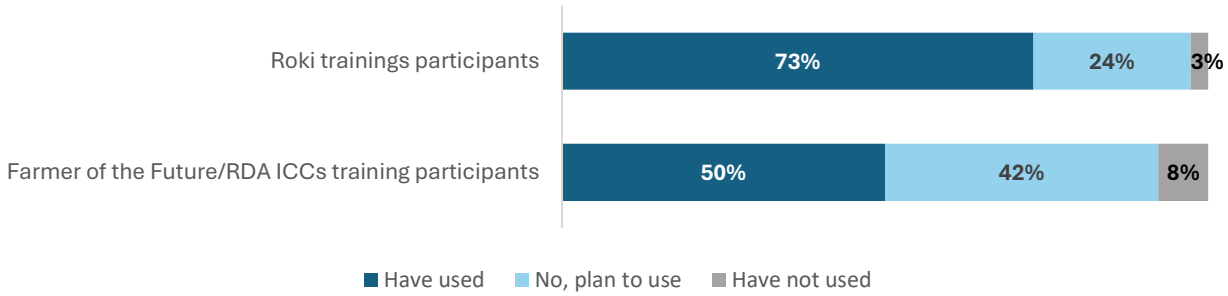

***Figure 7**. Use of information/ products from the training in practice by type of training*

Respondents who reported applying the knowledge gained from the trainings were asked to specify which practices they had adopted. Using feed supplements (such as probiotics, prebiotics, or mineral blocks) and providing balanced feed (appropriate mixes of forage, concentrates, minerals, and vitamins) were the most frequently cited practices, mentioned by **75** and **68 percent** of respondents respectively. Improved cowshed management, ensuring regular access to clean drinking water, and improved milking hygiene were also commonly reported.

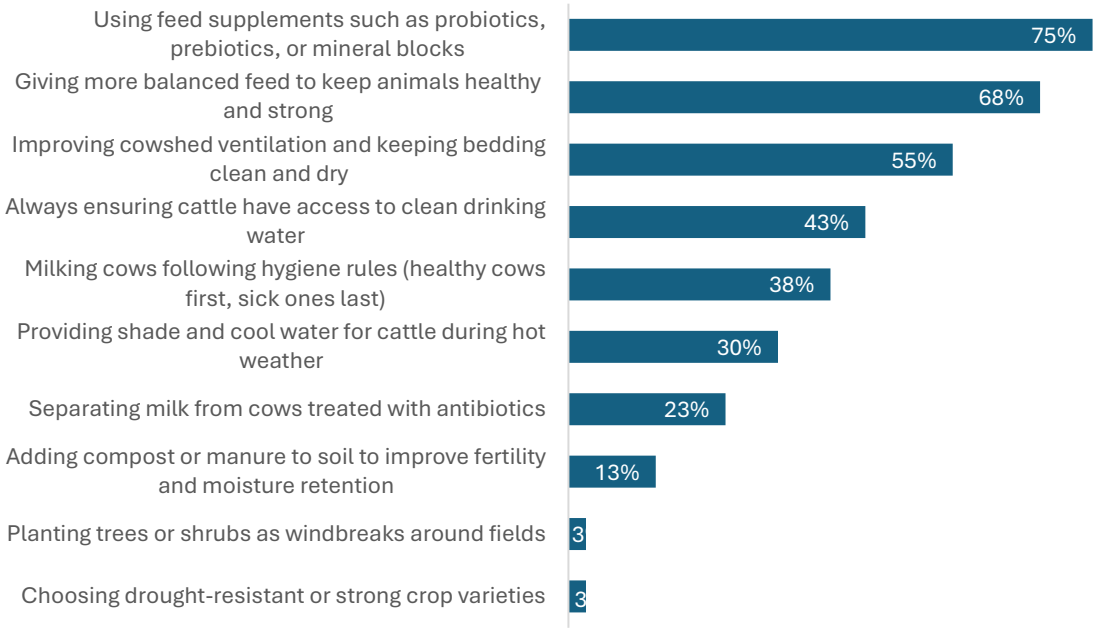

***Figure 8**. Applied practices after attending the trainings*

Usage of Feed Supplements

Among the respondents who had applied the knowledge or products from the trainings, **75%** (30 respondents) reported using at least one Roki feed supplement. On average, each user reported using three different Roki products. Among respondents who attended Roki-organized trainings, **70%** (26 respondents) reported using these products for the first time.

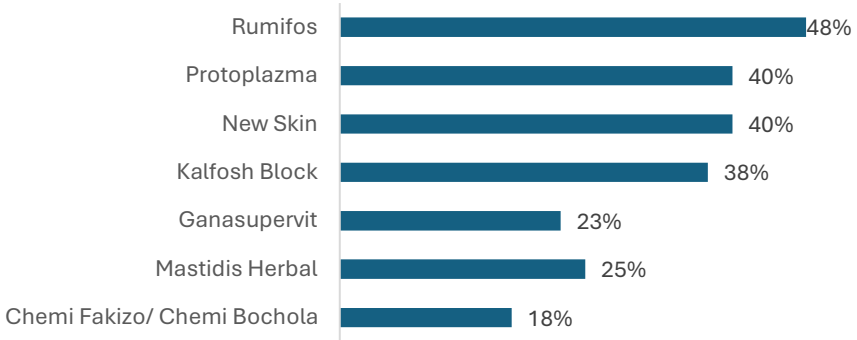

***Figure 9**. Usage of Roki products feed supplements by type among farmers*

Impact of Using New Practices

The most frequently reported outcome of applying the practices and products was **improved animal health**, cited by **73%** of respondents who had implemented the practices. **Increased milk yield (58%)** and **improved weight gain (48%)** were also commonly reported. Respondents who observed **productivity changes** estimated an average increase of approximately **24%** for both milk yield and weight gain.

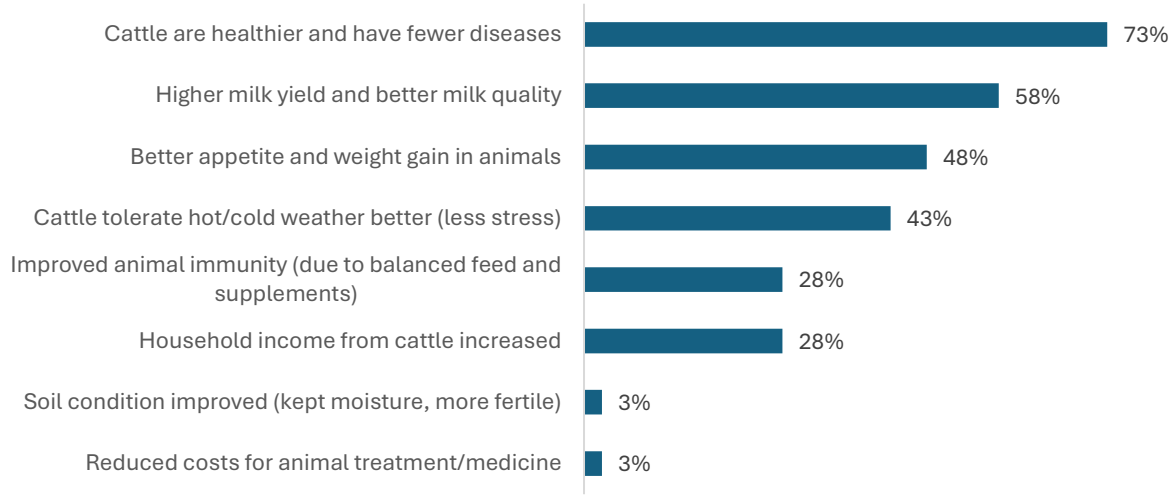

***Figure 10**. Named benefits by those who used the practices learned from the training*

Additionally, **43%** of respondents reported that their cattle coped better with extreme heat or cold conditions. **28%** of respondents perceived an overall increase in household income from livestock as a result of implementing the practices learned during the trainings.

Sharing Useful information

Among respondents who had applied the practices and found the trainings useful, **83%** reported sharing information or experiences with relatives, friends, or neighbours. On average, each respondent shared information with four other people

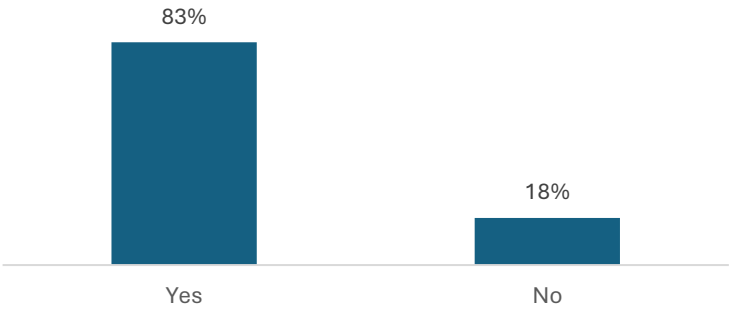

***Figure 11**. Sharing knowledge to others*

INCLUSION

Information Access and Language Gaps in Armenian and Azerbaijani-Speaking Communities

Interviewer observationss highlighted distinct information access patterns in Armenian and Azerbaijani-speaking communities. In predominantly Armenian-speaking areas such as Akhalkalaki, veterinary pharmacies serve as the primary source of information and the main channel for accessing veterinary products. These pharmacies maintain close cooperation with Roki, while the role of the Information and Consultation Centres remains limited and largely focused on state vaccination programmes. Awareness of new products and practices is generally low, and farmers tend to purchase new veterinary inputs only when explicitly recommended. As a result, farmers rely heavily on veterinary pharmacies for decision-making and pay limited attention to product labels or active ingredients.

Overall, the survey found a substantial information gap in Armenian and Azerbaijani speaking communities. Given their central role, strengthening the capacity of veterinary pharmacies is critical, as they currently function as the main effective information channel. For many farmers, participation in Roki trainings represented their first exposure to climate-smart livestock practices and to the link between preventive animal health measures and climate-related risks. These trainings temporarily broadened access to knowledge beyond routine product recommendations, highlighting the importance of continued, language-accessible extension services.

While Roki provides trainings in Armenian and Azerbaijani, coverage in these languages remains limited. Outside of in-person sessions, most informational content, especially on social media and digital platforms, is currently available only in Georgian. Expanding Armenian and Azerbaijani languages trainings require additional resources, such as interpreters and extended time for delivery, which present operational challenges and affect the frequency and reach of activities. Consequently, Armenian and Azerbaijani speaking communities have comparatively lower access to information on climate adaptation and climate-smart livestock practices.

Accordingly, Roki should strengthen its engagement with veterinary pharmacies in local communities, as these often serve as the primary source of information for farmers. Systematically collecting feedback from these pharmacies would help tailor information delivery and guide the planning of future activities, supporting more inclusive extension services and improving access to climate-smart knowledge.

Observed Role-Model Locations: Tsalka and Adigeni

Interviewers indicated that municipalities where both Roki specialists and RDA extension specialists are actively engaged show higher awareness and application of climate-smart practices. Tsalka which has diverse ethnic composition with more than half no Georgian population[6] illustrates this synergy well: farmers combine the use of Roki products with climate-smart practices promoted through RDA services. A well-prepared veterinary pharmacy plays a central role by providing quality advisory support, integrating

[6] Based on Georgia's population census data widely reported from the 2014 census and later estimates Georgians: ~46.7%, Armenians: ~38.8%, Azerbaijanis: ~7.0%,Greeks: ~6.9%

climate adaptation messages into consultations, and offering clearer guidance on product selection and use, resulting in broader and more balanced product uptake.

Similar patterns were observed in Adigeni, where farmers are predominantly Georgian-speaking and both Roki and extension specialists are active. Farmers demonstrate higher awareness of climate-smart practices, greater familiarity with specific products, and clearer understanding of their use. In this context, gender roles in decision-making and information access are more balanced, contributing to stronger adaptive capacity, higher livestock productivity, and more effective responses to emerging animal health challenges through coordinated support from veterinary pharmacies and extension services.

Context of Economic Deprivation: Mtskheta

In Mtskheta, the survey was conducted in a settlement of internally displaced persons affected by the 2008 Russian invasion of Georgia. The settlement was deliberately selected as a non-mainstream livestock community, where animal husbandry is not the primary economic activity; however, households keep livestock, and cheese production and sales represent a modest but meaningful source of income.

This particular settlement was recommended by the Mtskheta extension specialist due to the compounded challenges faced by its residents. As a result of forced displacement, households experience additional social and economic barriers, which require intensified engagement from extension services and parallel support from state institutions aimed at mitigating these constraints.

Severe water shortages and economic hardship significantly limit farmers' ability to apply recommended climate-smart practices. While farmers participate in extension trainings, structural constraints—particularly limited water access and financial pressure, restrict practical implementation. Daily priorities are largely focused on meeting basic needs rather than investing in longer-term productivity or climate adaptation, highlighting how socio-economic and environmental constraints can limit the effectiveness of extension services even where access exists.

Conclusion

This updated assessment indicates that climate-smart extension activities have contributed to the application of new livestock management practices among a substantial share of trained farmers. Respondents who adopted the practices reported early positive outcomes, particularly in animal health, productivity, and the ability of livestock to cope with climate-related stress. The findings also suggest active peer-to-peer knowledge sharing, extending the reach of the intervention beyond direct participants. The assessment therefore substantiates the relevance and added value of continuing and scaling up such interventions, demonstrating that they are justified and likely to generate tangible benefits for livestock farmers.

At the same time, climate change continues to pose significant challenges for livestock producers, and financial constraints remain a barrier to wider adoption of some practices like investing in cowshed improvements. The results underline the importance of continued support for climate-smart extension, with attention to practical applicability, affordability, and sustained follow-up to better understand longer-term outcomes and patterns of adoption.