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The FarmForward Project: Sustainable and Transformative Strategies for Climate-Resilient Agriculture in VET

WP2

Needs Analysis National Report

Lithuania

Project Partners



The FarmForward Project: Sustainable and Transformative Strategies for Climate-Resilient Farming in VET

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Table of Contents

Educators Questionnaires Analysis.....	3
General Information.....	3
Current situation	5
Fields to Improve	15
Challenges, fields for improvement and possibilities	18
Learners Questionnaires Analysis	20
General Information.....	20
Current situation	22
Fields to Improve	28
Challenges & Reflections	30
Stakeholders Questionnaires Analysis.....	32
General Information.....	32
Current situation	34
Fields to Improve	40
Challenges & Reflections	44

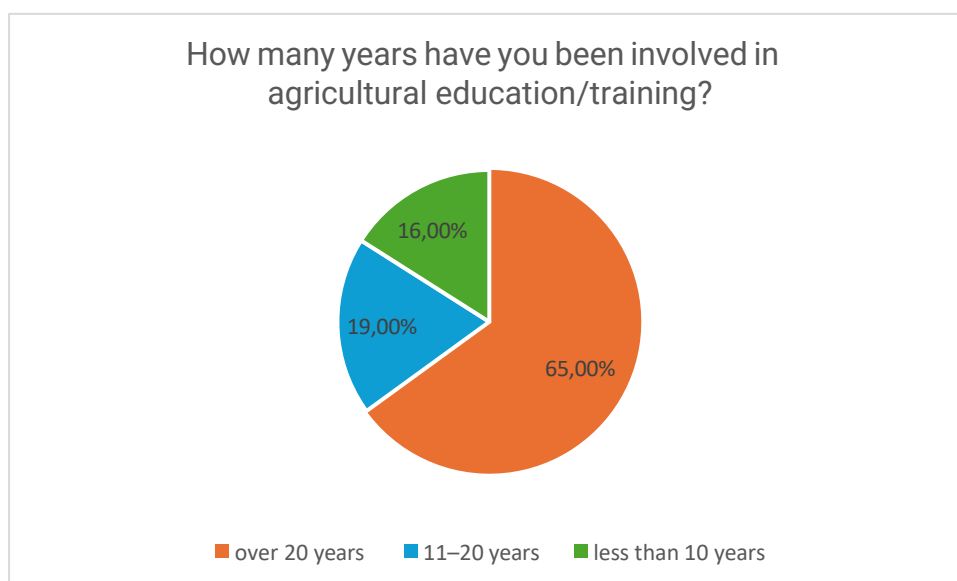
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Educators Questionnaires Analysis

General Information

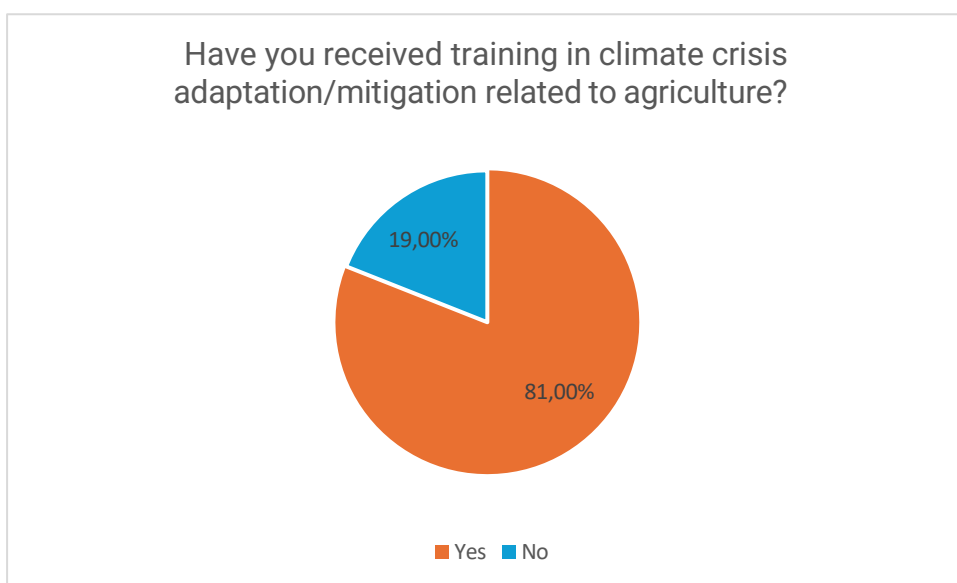
The general number of VET educators involved in agricultural education and training who participated in the project survey is 26. All participants represent vocational education training (VET) schools in Lithuania, therefore, it can be concluded that the survey of educators in Lithuania specifically reflects the perspectives of VET teachers on teaching climate-resilient agriculture in vocational education institutions.

Most respondents have very long education experience in teaching the agriculture related subjects: 17 educators (65%) have over 20 years of teaching experience, 5 educators (19%) have 11–20 years, and 4 educators (16%) have less than 10 years of experience. This indicates that most VET teachers are motivated to stay working in this education field, have a lot of practical classroom experience.



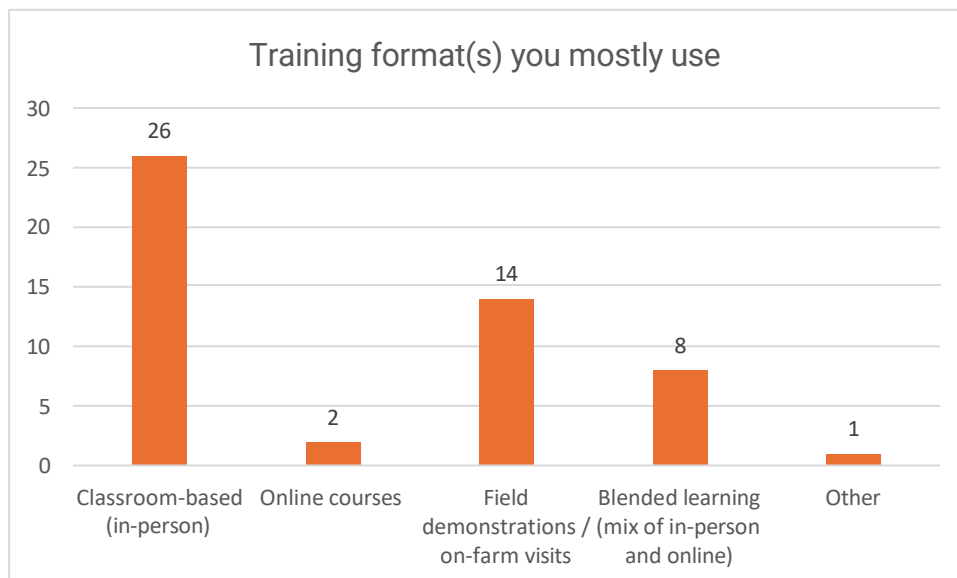
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In regard to participating in training on climate change adaptation and mitigation in agriculture, it can be stated that throughout educators' long-term careers in vocational education institutions most of them (80%) participated in climate change adaptation and mitigation in agriculture trainings, and only 5 of them have not yet received this type of training. The study reveals that those teachers who haven't yet participates in this type of training are the ones who have been working in VET for a shorter period of time (from 5 to 20 years).



In terms of the teaching methods VET teachers mostly use, all teachers (100%) indicated that they use traditional in-person classroom-based instruction. More than half (54%) understand the importance of practical teaching, provision of good examples, therefore, incorporate field-based activities such as visits, demonstrations and outdoor exercises into their teaching. 31% of educators indicated that they tend to combine several teaching approaches. Online teaching is not widely used: only 8% of respondents indicated that they use internet courses. It is encouraging to see that, alongside traditional classroom lessons, more practical and attractive forms of teaching are applied in VET schools.

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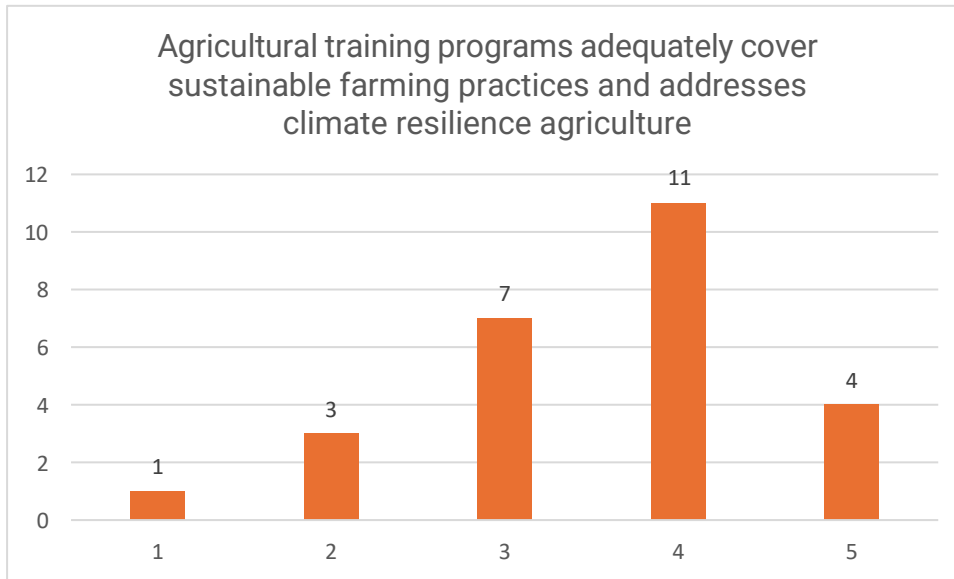
Current situation

Agricultural training programs adequately cover sustainable farming practices and addresses climate resilience agriculture

The majority of respondents (57.7%) expressed strong agreement with this statement selecting score 4 or 5, 27% answered that they are not sure about this aspect, while only 15.3% selected low levels of satisfaction with it. The overall picture suggests that VET teachers have quite positive opinion about agricultural training programs and that the content related to climate resilient agriculture is sufficiently reflected in the curriculum, however still there is space for improvement of this aspect of the curriculum.

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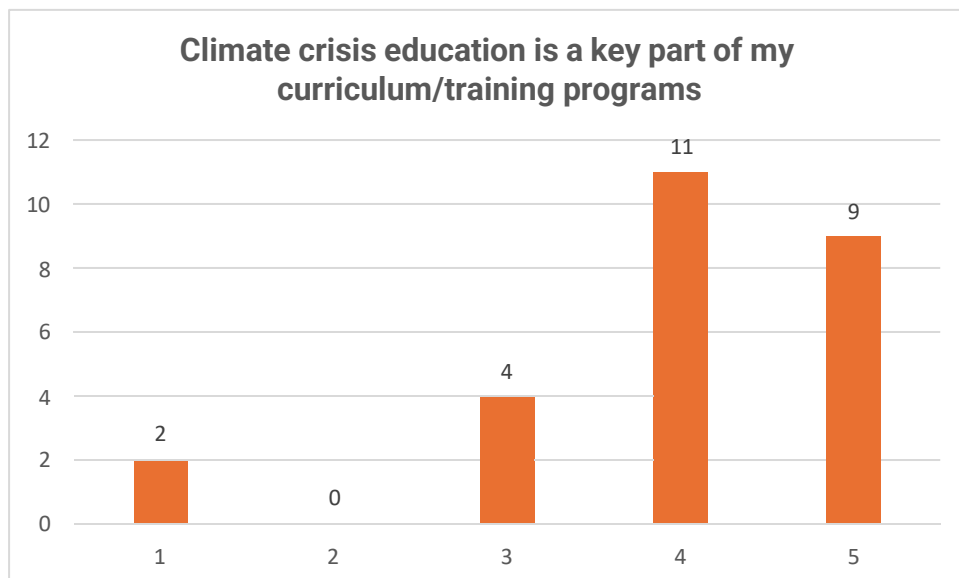


Climate crisis education is a key part of my curriculum/training programs

Similarly, positive trends can be observed when evaluating this statement. As many as 77% of respondents agree that climate crisis education is a key part of training programs, while only 8% fully disagree with this statement. Therefore, it can be concluded that VET institutions place considerable emphasis on this subject, taking into account the significance of this issue and importance of providing information about this issue to students.

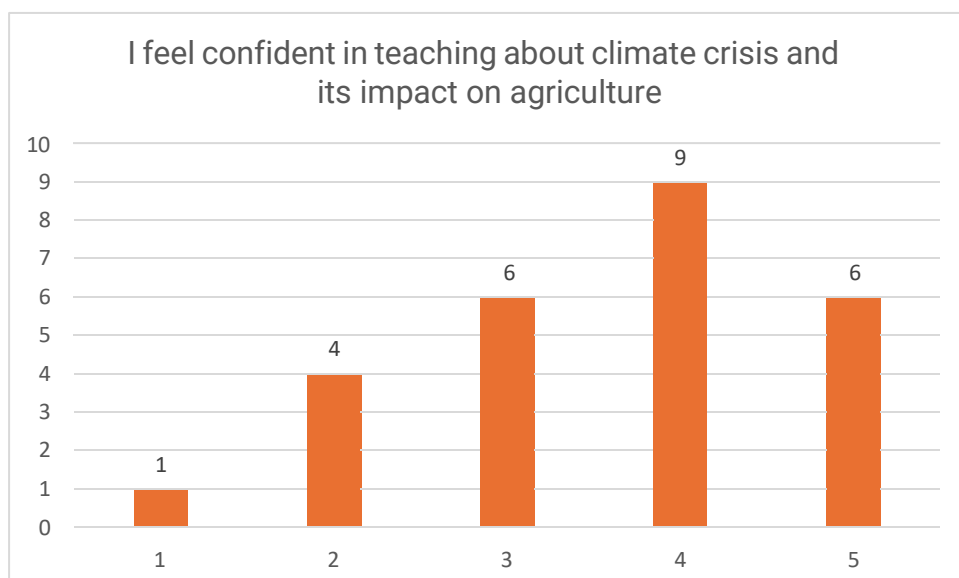
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I feel confident in teaching about climate crisis and its impact on agriculture

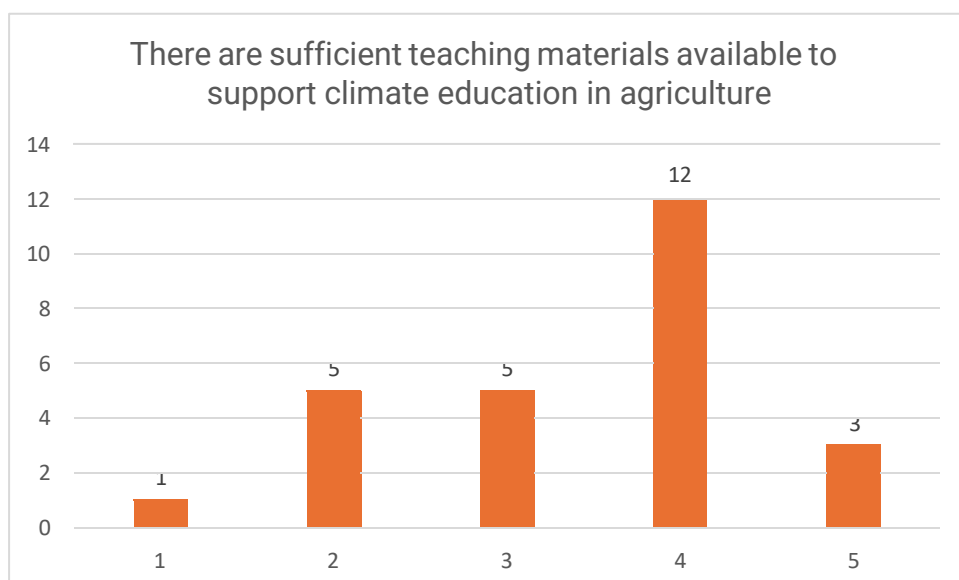
The VET educators in evaluating their own confidence when teaching about climate change and its impacts on agriculture were quite positive: 23% selected a score of 5 and 35% selected a score of 4, 23% positioned themselves neutrally at 3. Only 19% of educators expressed lower levels of confidence, selecting scores of 1 or 2.



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There are sufficient teaching materials available to support climate education in agriculture

In terms of the adequacy of available teaching materials supporting climate-related education in agriculture, the responses revealed moderate satisfaction. The biggest part of respondents (46%) assigned a score of 4, only a minority of 12% selected the highest score 5. 42% evaluated that there is shortage of professionally prepared, relevant and easily accessible teaching resources. High-quality teaching materials could help teachers improve their skills and offer VET students better learning content.



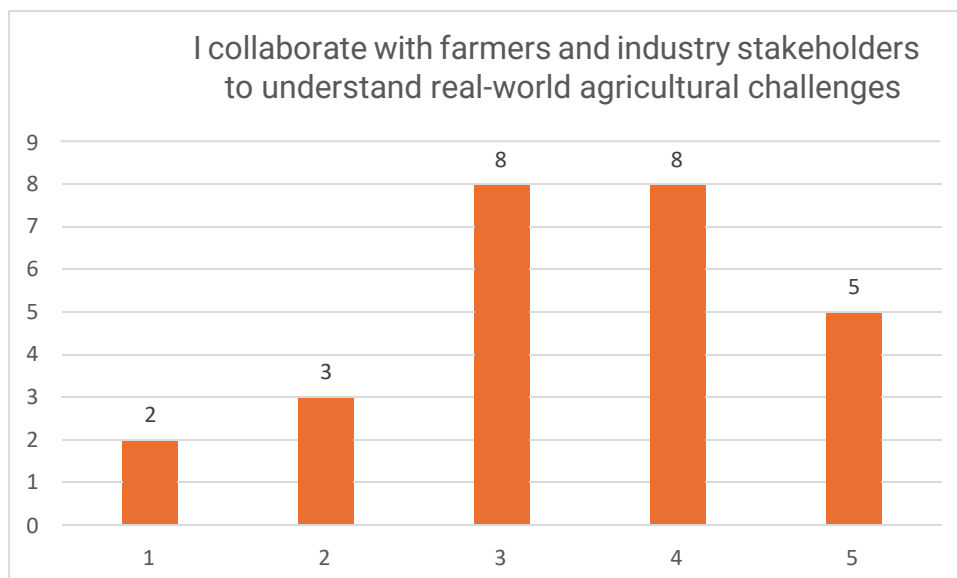
I collaborate with farmers and industry stakeholders to understand real-world agricultural challenges

Only 19% of the educators rated their collaboration at level 5, 31% rated it at 4. Nevertheless, 31% remained neutral, and 19% selected low scores (1 and 2), indicating that respondents don't collaborate intensively with farmers and stakeholders. Therefore, it could be stated that it could be closer cooperation among educators,

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farmers and industry stakeholders in order to ensure better VET teachers awareness of practical issues in agriculture and their ability of to use practical aspects in teaching.

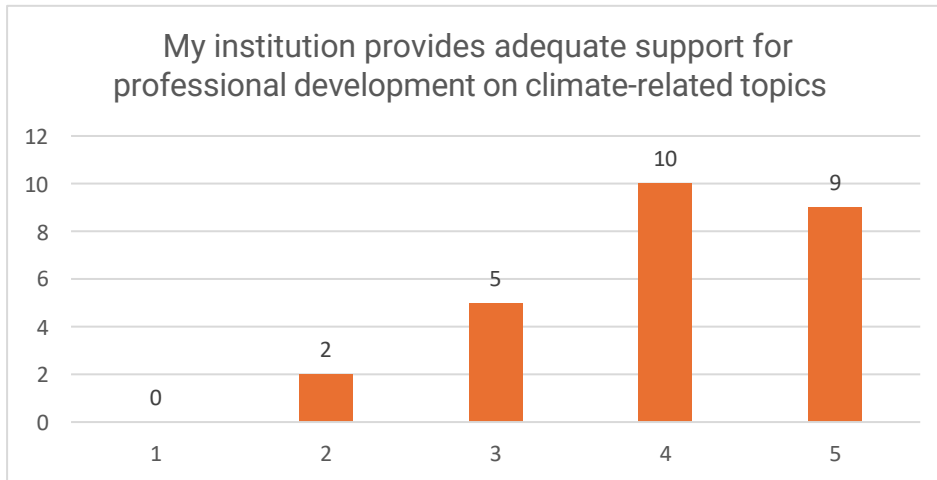


My institution provides adequate support for professional development on climate-related topics

Regarding this aspect, educators expressed high satisfaction: as much as 73% were positive, assigning scores of 4 and 5. The number of educators who don't get adequate support for professional growth is relatively very low – only 8% selected the score 2 and 19% of teachers have neutral opinion in regard to this statement.

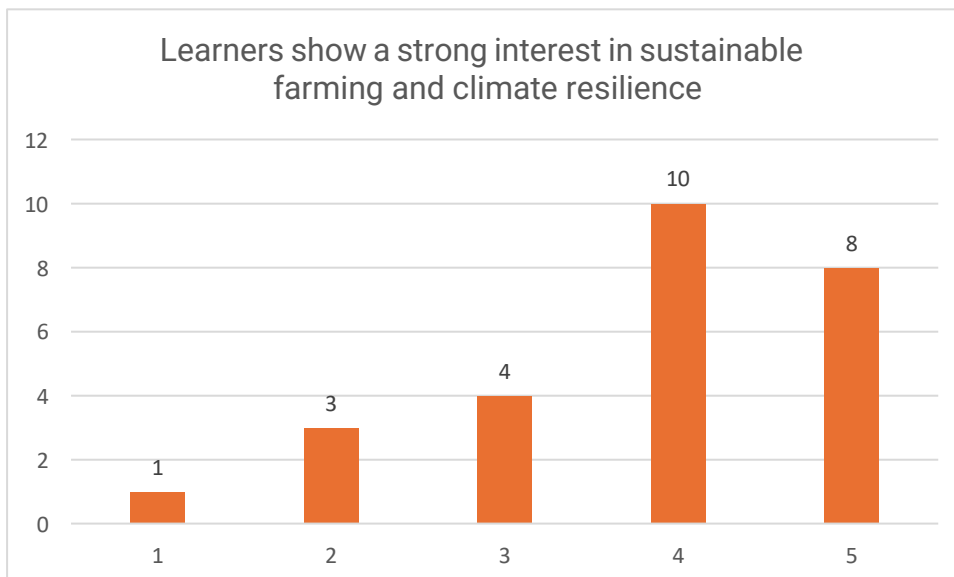
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Learners show a strong interest in sustainable farming and climate resilience

The educators have quite positive opinion about their students, as much as 69% evaluated that students have quite strong interest in sustainable farming and climate resilience. On the other hand, 31% of respondents were neutral or indicated low levels of students' interest. This indicates a rather strong willingness of VET learners to engage with climate-resilient agriculture topics.

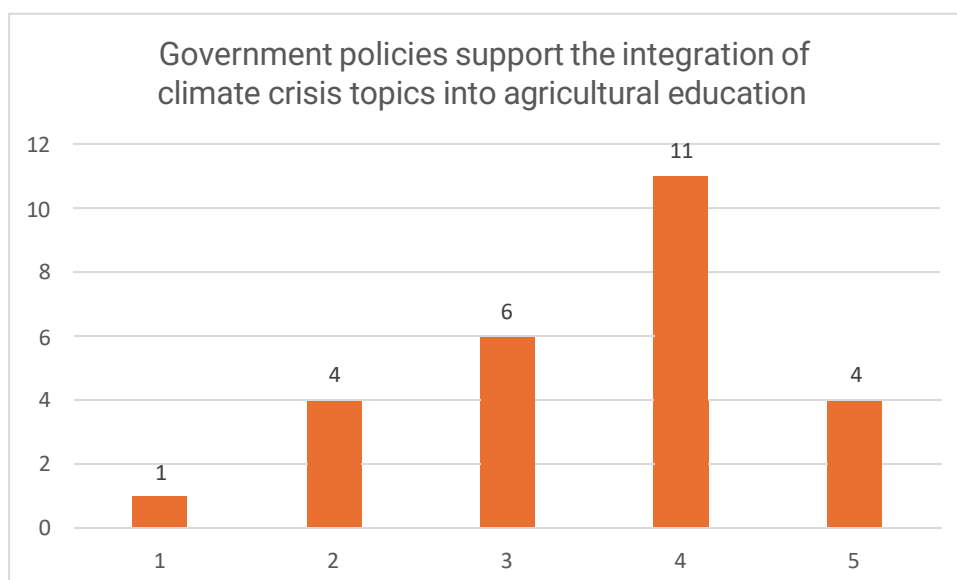


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Government policies support the integration of climate crisis topics into agricultural education

When evaluating this statement, educators were less optimistic: only 16% of educators rated this support at level 5, 42% of educators have chosen the score 4. Interestingly the same amount of educators has quite pessimistic view in this regard – 42% respondents rated the statement with score 1, 2 or 3. These findings point to that governmental policy frameworks are still insufficient to facilitate systematic climate crisis education topics integration into agricultural education.

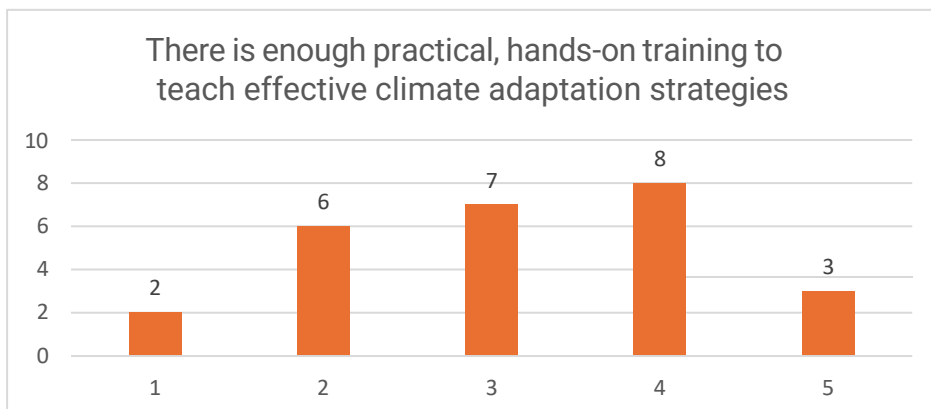


There is enough practical, hands-on training to teach effective climate adaptation strategies

On this statement most educators remained quite pessimistic as well: more than half of respondents have selected 1, 2 or 3 for evaluation. This shows that a clear majority believe that practical training is insufficient. It seems that there is a significant lack of field-based, hands-on training experience, highlighting the need to expand demonstration sites and practical learning opportunities.

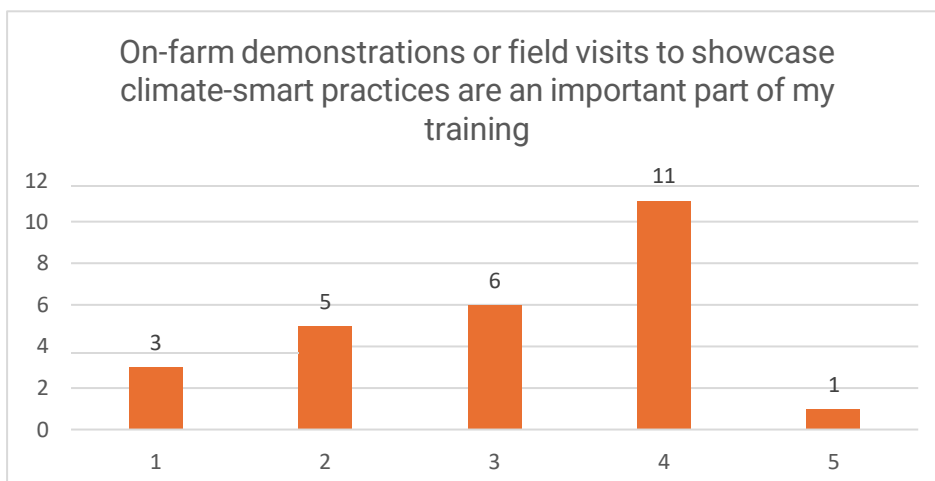
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On-farm demonstrations or field visits to showcase climate-smart practices are an important part of my training

In general, the responses were quite encouraging. A total of 46% rated these activities at level 4 and 5. However, 24% were neutral and 30% gave lower scores (1 and 2 combined), indicating that while a part of educators does offer real-life examples, have access to field visits, others do not rely on practical training opportunities.



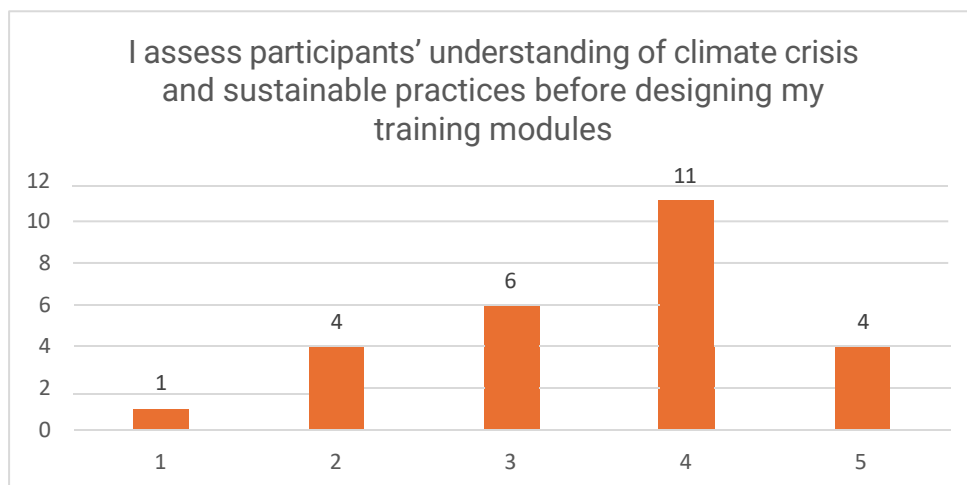
I assess participants' understanding of climate crisis and sustainable practices before designing my training modules

Almost half of the respondents 42% rated this at level 4, and 16% at level 5, suggesting that at VET schools there is quite widespread practice of adapting content to learners'

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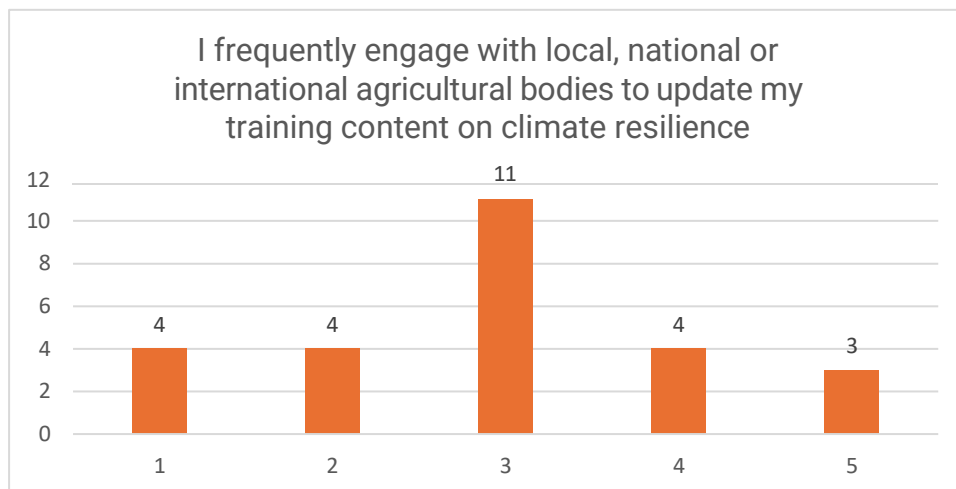
prior knowledge. However, 42% selected the scores of 1, 2 or 3, indicating that other educators don't pay much attention to learners' knowledge present before teaching them. There is room to strengthen needs assessments in VET to better tailor teaching to learners' present knowledge.



I frequently engage with local, national or international agricultural bodies to update my training content on climate resilience

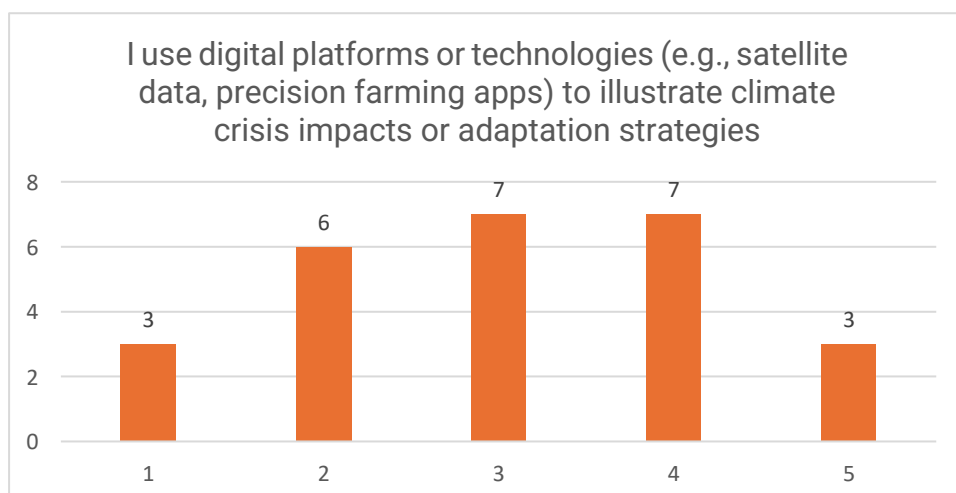
The majority chose a neutral response (42%) or disagree with this statement (31%), which indicates that consultations in practice are not frequent. Only 27% indicated that they collaborate with local, national or international agricultural bodies to update training content on climate resilience. This shows that encouraging cooperation with agricultural institutions could be improved and contribute to higher level of VET education.

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I use digital platforms or technologies (e.g., satellite data, precision farming apps) to illustrate climate crisis impacts or adaptation strategies

The same share of respondents (27%) selected the neutral score of 3 or the score 4, while only 12% gave the highest score of 5. On the other hand, 34% of the educators expressed limited or no use of such tools, selecting evaluation of 1 or 2. These results indicate that while a growing number of educators have started to integrate digital technologies into their teaching, a significant proportion has not yet fully understood usage of new modern tools.

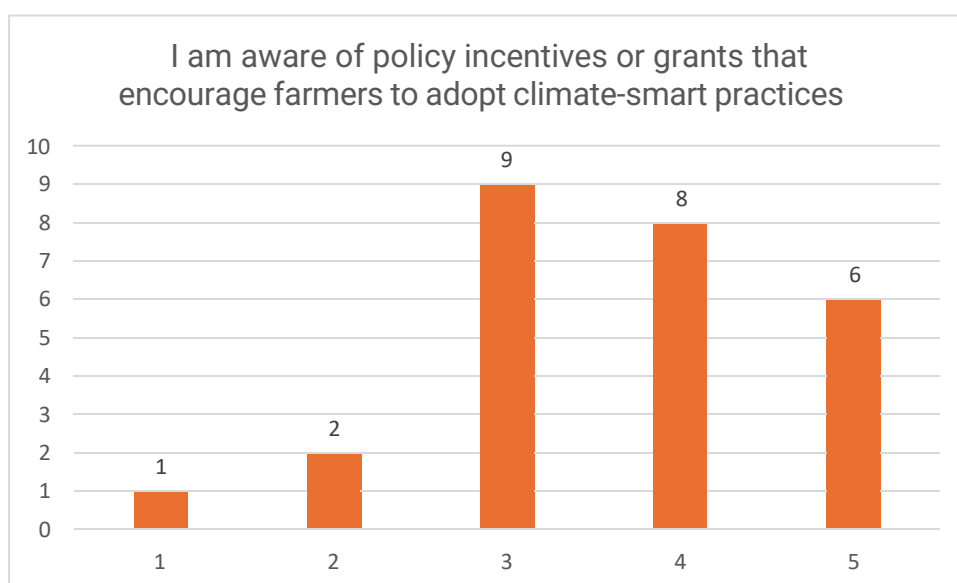


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I am aware of policy incentives or grants that encourage farmers to adopt climate-smart practices

More than half of the respondents (54%) rated their knowledge positively at level 4 and 5, 34% selected the neutral score of 3. And only 12% indicated limited awareness, selecting scores of 1 or 2. These results suggest that VET teachers are quite well familiar with relevant policy frameworks and provide this information to their students.



Fields to Improve

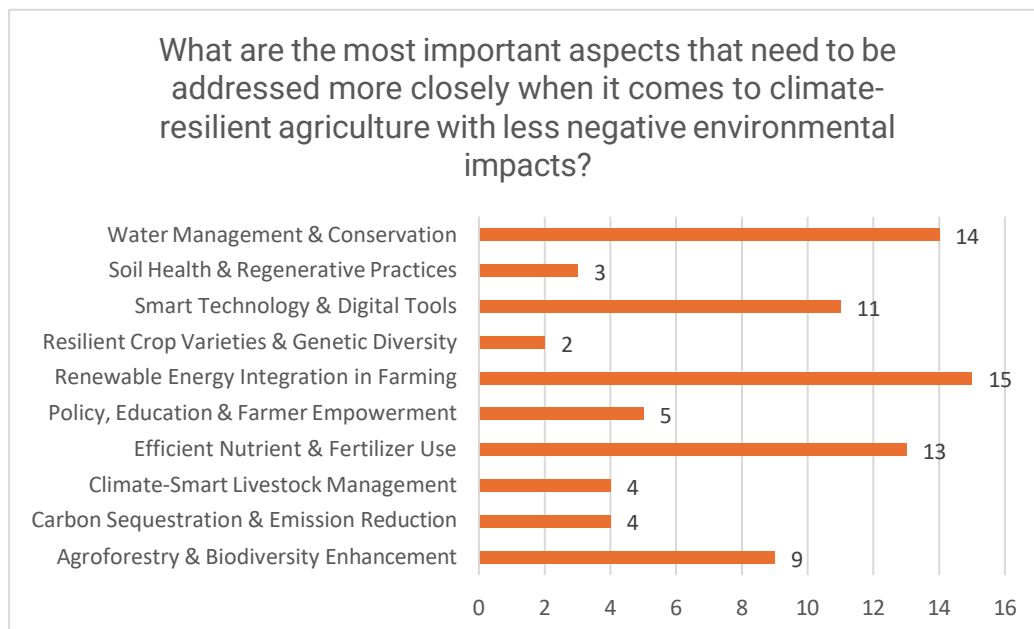
What are the most important aspects that need to be addressed more closely when it comes to climate-resilient agriculture with less negative environmental impacts?

When asked to prioritize which areas should receive greater emphasis in building climate-resilient agriculture, the majority of educators indicated these aspects: renewable energy integration (15 responses), water management & conservation (14 responses), efficient nutrient & fertilizer use (13 responses) and smart technology & digital tools (11 responses). Evaluation of other aspects was much lower. This

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distribution suggests that educators recognize the importance of mostly technological and nature-based solutions in building climate-resilience in farming.

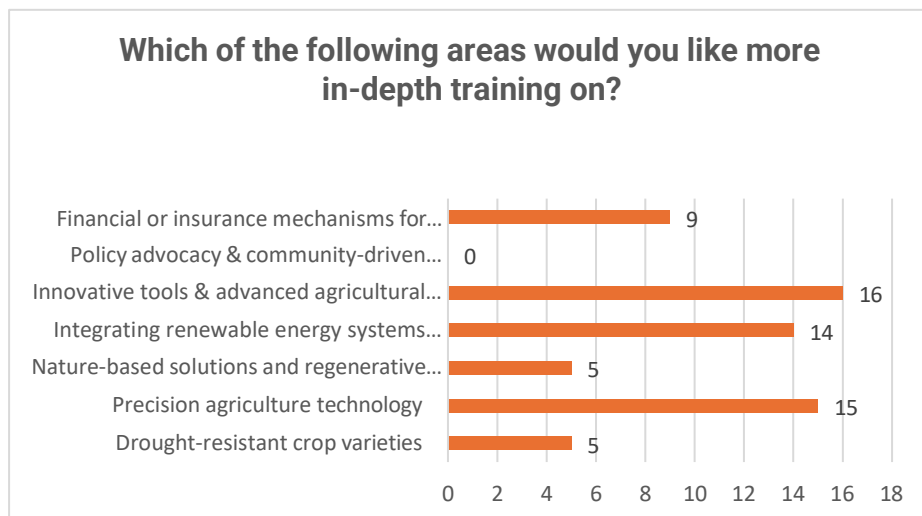


Which of the following areas would you like more in-depth training on?

VET educators mostly emphasized technical topics: innovative tools & advanced agricultural technologies (16 responses) and precision agriculture (15 responses). Renewable energy integration was also indicated as important topic for educators (14 responses). In contrast, nature-based solutions and regenerative practices (5 responses) and drought-resistant crop varieties (5 responses) received the lowest evaluation, suggesting that biological or ecological approaches are currently less prioritized compared to technology-focused strategies. One interesting result is that nobody from respondents indicated the topic of the policy advocacy & community-driven climate action as important for their training.

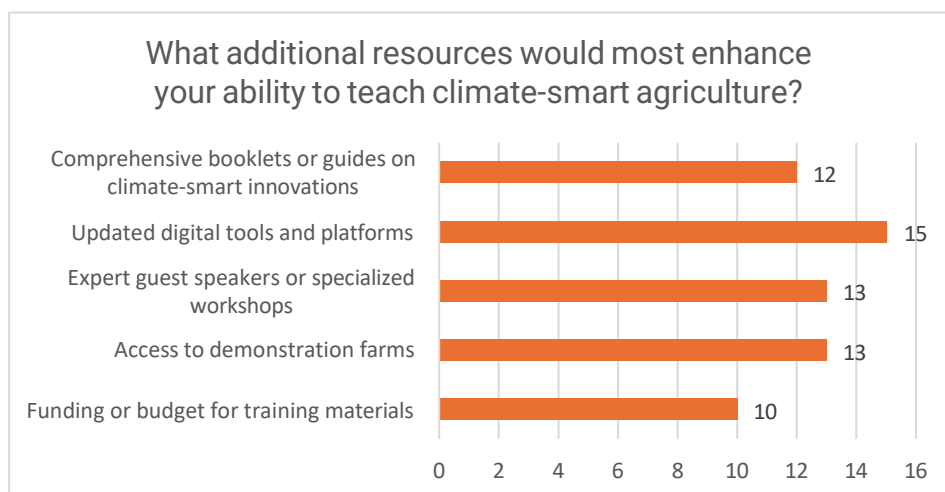
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What additional resources would most enhance your ability to teach climate-smart agriculture?

Respondents evaluated digital tools the best (15 responses), expert guests input (13 responses) and the access to demonstration farms (13 responses) are also very important for VET educators. 12 respondents indicate that comprehensive booklets or guides on climate-smart innovations would be helpful as well in teaching process.



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Challenges, fields for improvement and possibilities

What are the main challenges you face in teaching climate crisis and resilience farming practices, and what resources would help?

When providing their answers to this open question, they indicated different problems. The most frequently mentioned issue by respondents is related to the teaching materials in this field. It is noted that there is a lack of high-quality, up-to-date training materials that cover the latest developments in climate-resilient agriculture; practically applicable information and training resources; practical examples demonstrating how climate change is already affecting farming in different regions and how this issue can be addressed; and engaging digital learning resources.

According to several respondents, although there is a lot of educational material available, it is often too complex, difficult to understand, unstructured, and not connected to real farming practices.

It was also noted that there is a lot of bureaucratic obstacles in modifying the curricula used in vocational education institutions and that there are limited financial resources available for updating or developing teaching programs. The training programs are lacking integrated teaching modules that would help develop an understanding of farming under the influence of climate change.

A few educators underlined that students themselves may sometimes lack basic awareness or motivation regarding climate-resilient agriculture, which makes the introduction of complex or advanced topics more challenging.

A few respondents stated that they do not see any problems in this area.

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What do you see as the biggest barrier preventing farmers from adopting climate-resilient techniques, and how might training address this?

Farmers face numerous challenges in adopting climate-resilient farming practices. The most frequently by the respondents mentioned barrier is limited access to financial resources, as climate-resilient techniques usually requires new investments, new technologies, new equipment and there is the difficulty in obtaining necessary funding for that. Farmers are often afraid to take risks because new technologies require change. Suggestion is that creating farmer groups where results can be observed in real life could help reduce fear and build confidence. It is stated that during training, it is essential to provide real examples showing how long-term investments pay off; to provide opportunities to try out technologies in practice, not just hear about them in theory.

A considerable number of educators noted that farmers lack information, training, knowledge, and motivation to make changes and respond to the changing climate situation. This is further complicated by the fact that climate changes in Lithuania can vary greatly from year to year – some years are marked by drought, while others experience excessive rainfall.

Looking ahead 10 years, what new or emerging climate challenges do you anticipate needing to address in agricultural training?

Respondents identified the following main problems, which are likely to intensify in the future: global warming, excessive deforestation, water scarcity, temperature fluctuations, and mutating pests and diseases. The suggested solutions include: selecting appropriate crop varieties, promoting farming methods that use little or no fertilizer, shortening the food supply chain so that products reach consumers more quickly, introducing new environmentally friendly technologies, recycling waste, and integrating new smart technologies into farms.

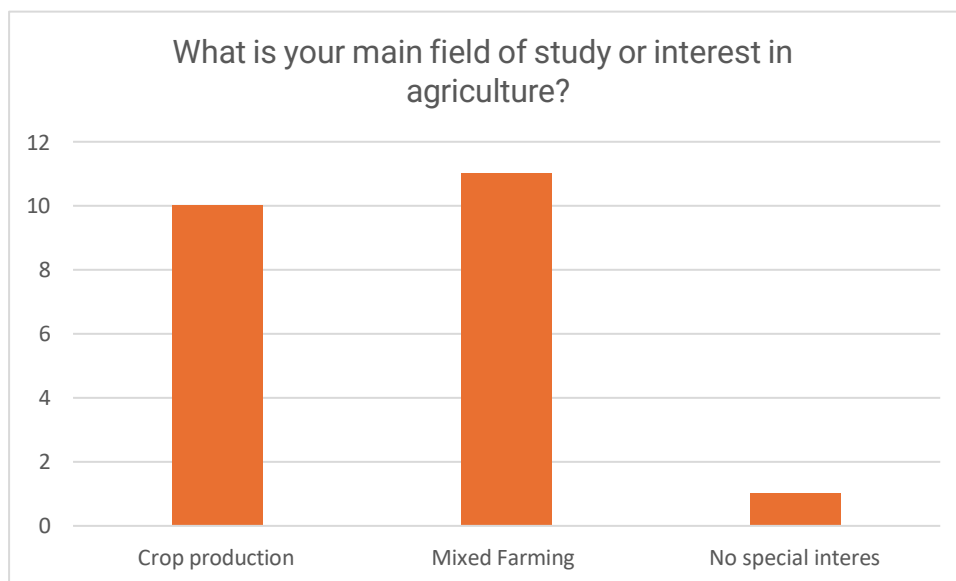
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Learners Questionnaires Analysis

General Information

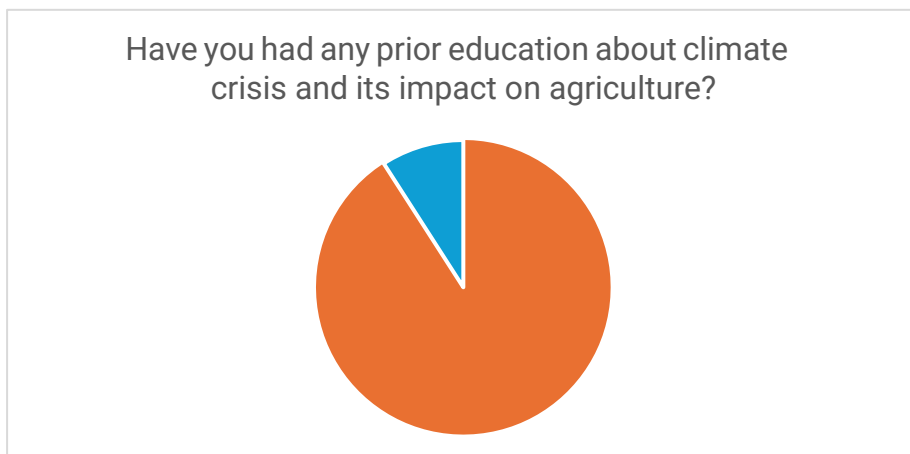
The general number of learners who participated in the project survey is 22. All participants are students of vocational education training (VET) schools in Lithuania, therefore, it can be concluded that the survey of learners in Lithuania specifically reflects the perspectives of VET students.

The survey shows that learners at VET primary interest lies in mixed farming and crop production, as 95% of respondents indicated these fields of interest. The Livestock Farming is not field of interest for VET students.

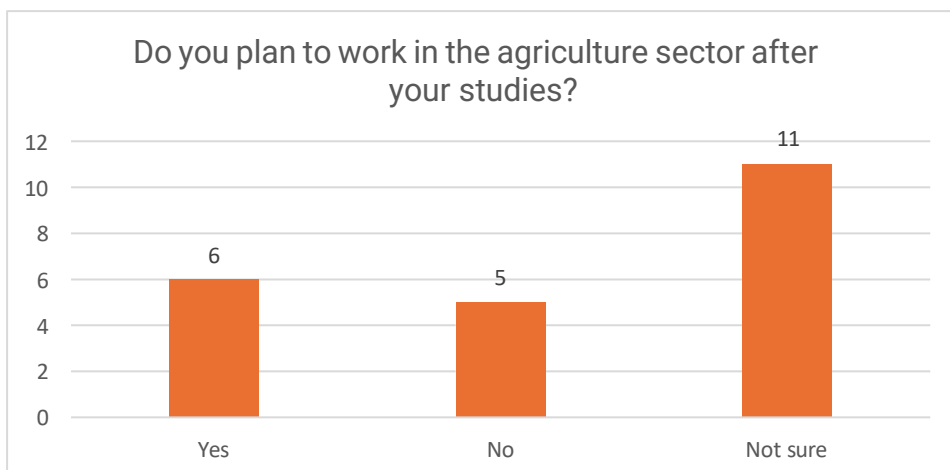


91% of students indicated that they have received some training on the climate crisis and its impact on agriculture. This shows that topics related to the impact of climate change on agriculture are being addressed in Lithuanian VET schools.

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In answering the question about plans to work in the agriculture sector after studies the most common answer was “Not sure” (50%). This indicates that many students are uncertain about their future career plans, possibly due to limited clarity about opportunities in the sector. The answer “Yes” was chosen by 27% students, what means that they are interested in working or doing business in agriculture. Almost the same size group (5 respondents) does not see themselves working in the agricultural sector after studies at VET at all.

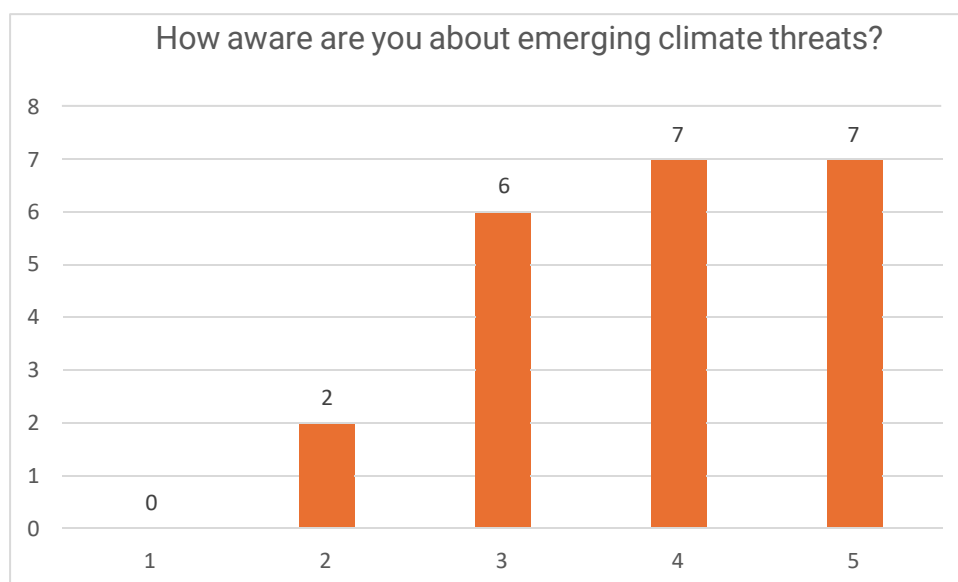


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Current situation

How aware are you about emerging climate threats?

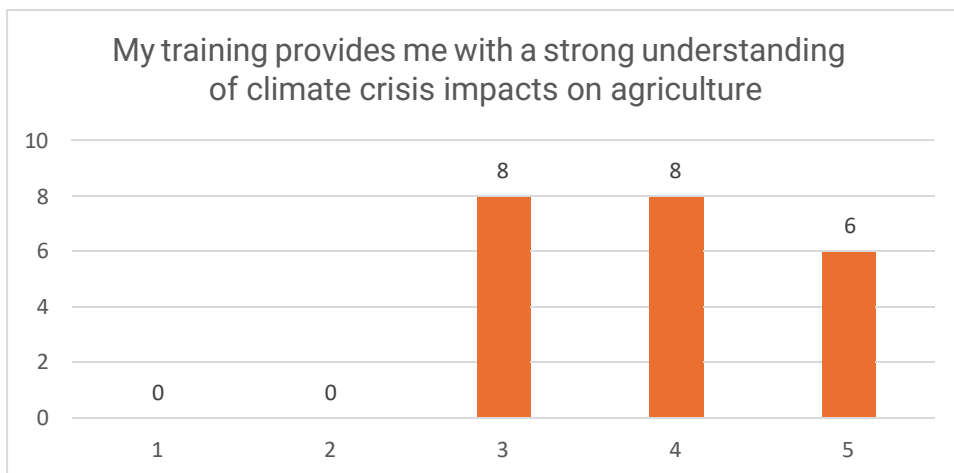
Most VET students feel well informed about emerging climate threats, with 64% students have chosen the responses of 4 and 5. No one selected level 1 and only about 9% of students chose level 2, what shows that only a few students feel almost unaware of these problems. 27% rated themselves at level 3, indicating a moderate level of awareness.



My training provides me with a strong understanding of climate crisis impacts on agriculture

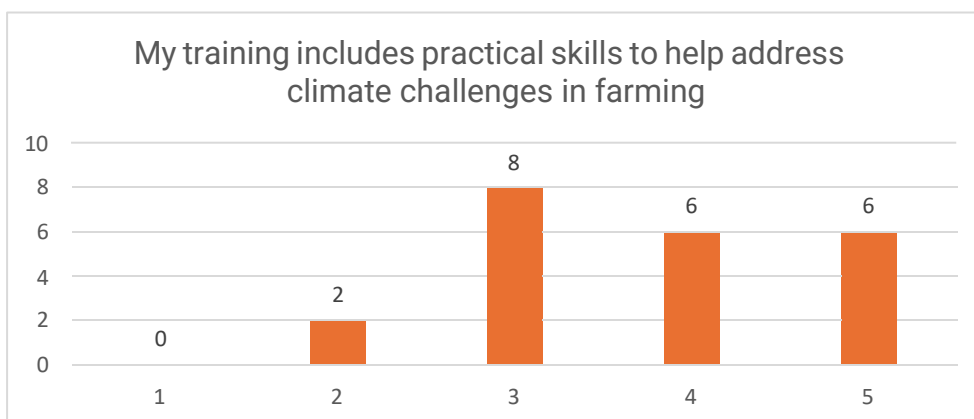
Almost the same part of VET students – 63% (as answers to the previous statement) have chosen evaluation 4 or 5, what suggests that the majority of them feel confident that training at VET schools helps them understand climate crisis impact on agriculture. No one chose level 1 or 2, meaning nobody completely disagrees with the statement. 8 students (around 36%) showed moderate agreement with this statement.

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My training includes practical skills to help address climate challenges in farming

In general VET students are less optimistic about practical skills acquired at VET schools. The largest group is at level 3 with 8 students (36%), showing that many students are neutral or only somewhat agree. Score 4 and score 5 each were chosen by 6 students (27% each), which means more than half of the students believe their training does include useful practical skills. In general VET schools can pay more attention to practical aspect of the training.

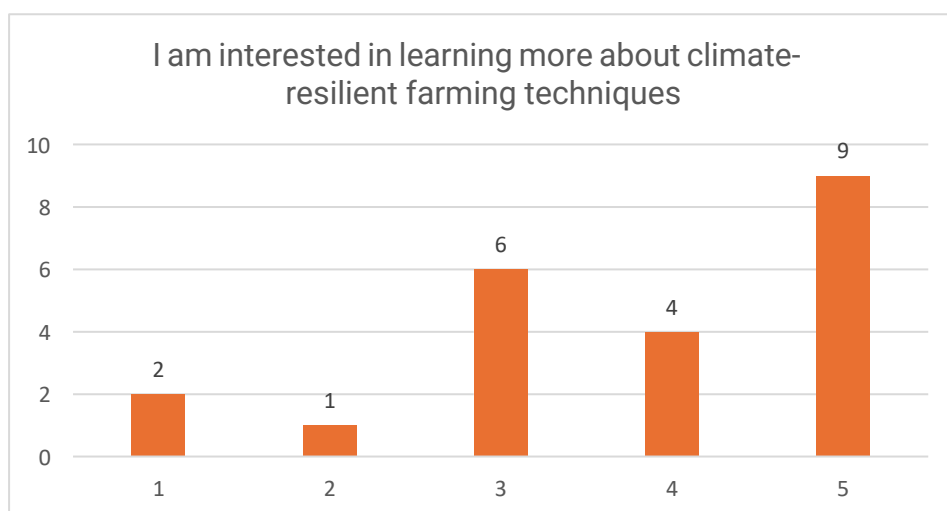


I am interested in learning more about climate-resilient farming techniques

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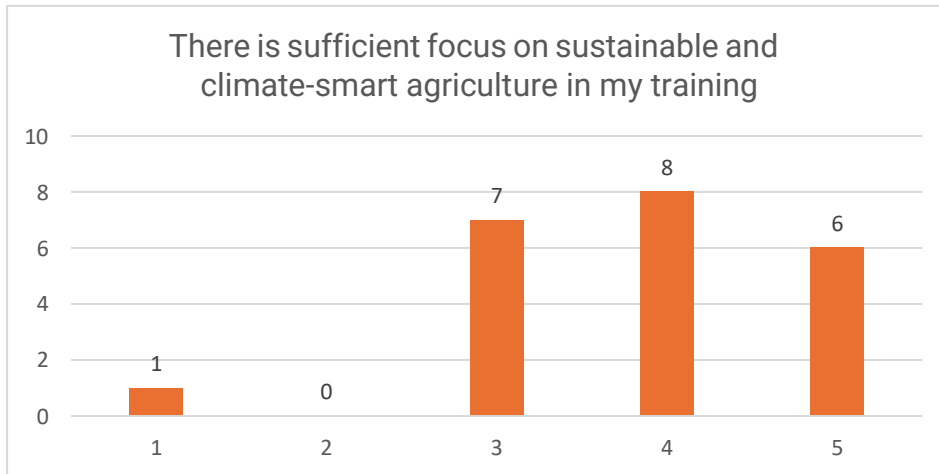
Only 3 students chose score 1 or 2, which means almost no respondents are not interested in getting more knowledge about climate-resilient farming techniques. About 27% students chose score 3, showing a moderate level of interest. The biggest part of students are interested in getting more knowledge: 18% students selected level 4, and the highest number of students (about 41%) – chose level 5. This means that most students are motivated and interested in gaining more knowledge about climate-resilient farming and potentially to use them in the future.



There is sufficient focus on sustainable and climate-smart agriculture in my training

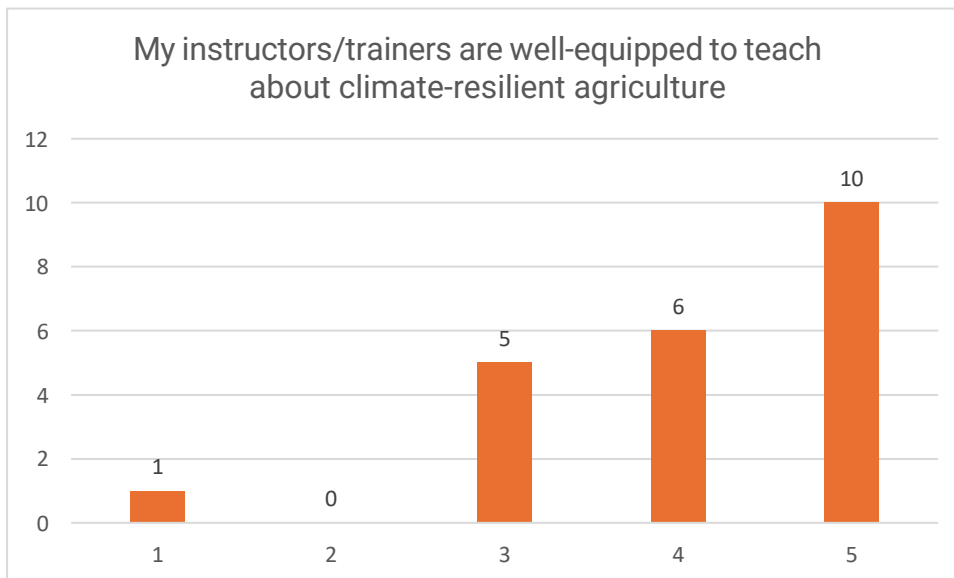
Almost no one disagrees with this statement. One third of respondents shows a neutral opinion. The largest group is at level 4 with 35% of students, another 26% of VET students chose level 5. Overall, more than 60% of students evaluate that their training includes a sufficient focus on climate-smart agriculture, however there is still room to improve.

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My instructors/trainers are well-equipped to teach about climate-resilient agriculture

In evaluating the teachers most students 16 (72%) (levels 4 and 5 combined) believe their instructors are well-prepared to teach about climate-resilient agriculture; they trust teachers' knowledge and abilities in this area.

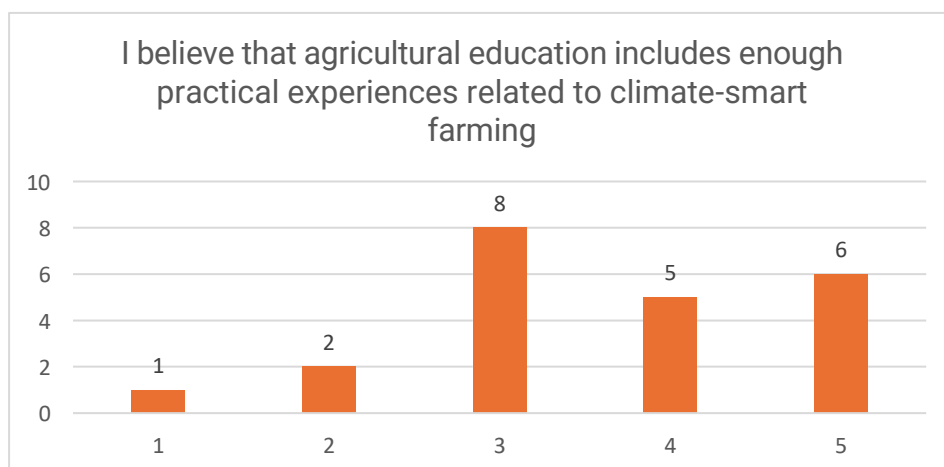


I believe that agricultural education includes enough practical experiences related to climate-smart farming

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The biggest number of respondents (36%) are not sure if there are enough practical experiences related to climate-smart farming, however in joint evaluation of 4 and 5, 50% agree that they get enough practical examples and experience in education. Maybe it shows that different schools differ in part of practical examples included in training programme depending on teachers' expertise and qualification.

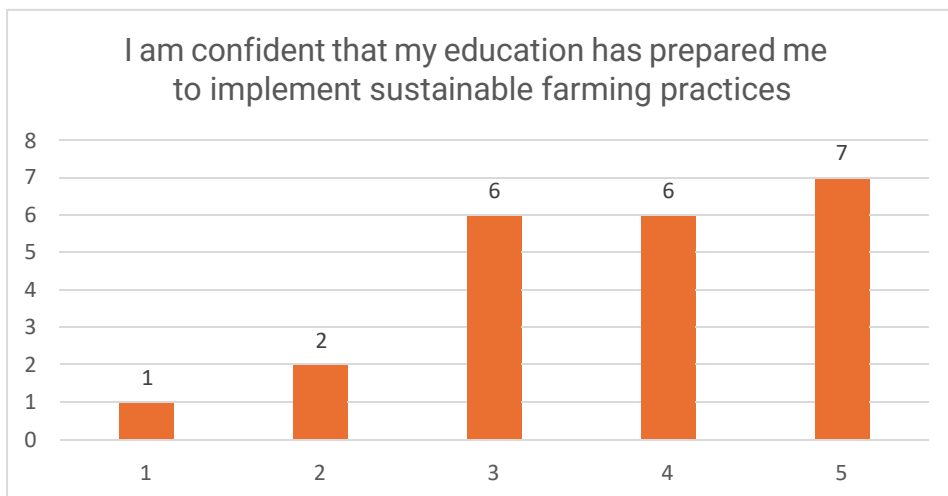


I am confident that my education has prepared me to implement sustainable farming practices

The biggest number of responses are at the higher evaluation levels: 6 students (about 27%) selected level 3, 6 students (27%) chose level 4, and 7 students (about 32%) chose level 5. This means that 59% of students (levels 4 and 5 combined) feel confident or very confident in their preparation. Overall, most students believe their education has given them the skills needed for sustainable farming.

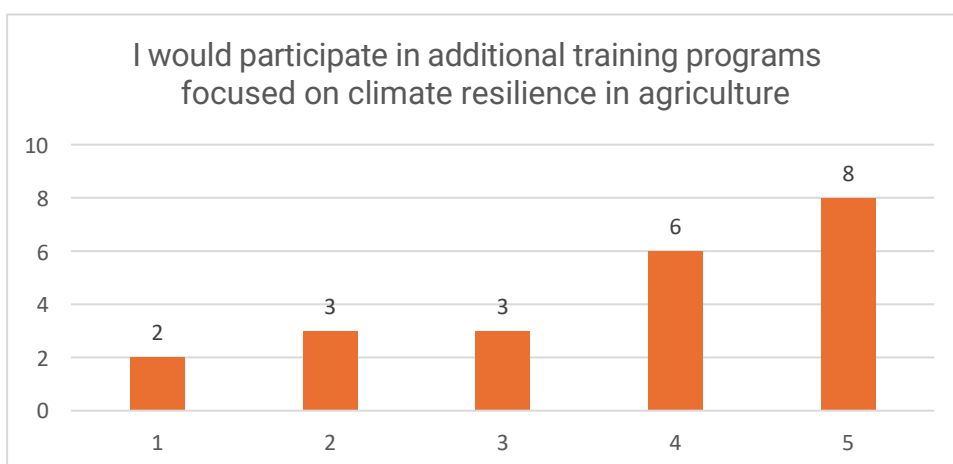
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I would participate in additional training programs focused on climate resilience in agriculture

In regard to this statement evaluation 23% of VET students chose levels 1 or 2, indicating that they are not interested in additional trainings. However, 63% of students (levels 4 and 5 combined) are very willing to participate in additional climate resilience training. This shows that most students are motivated to keep learning and improve their skills to better adapt agriculture to climate change.

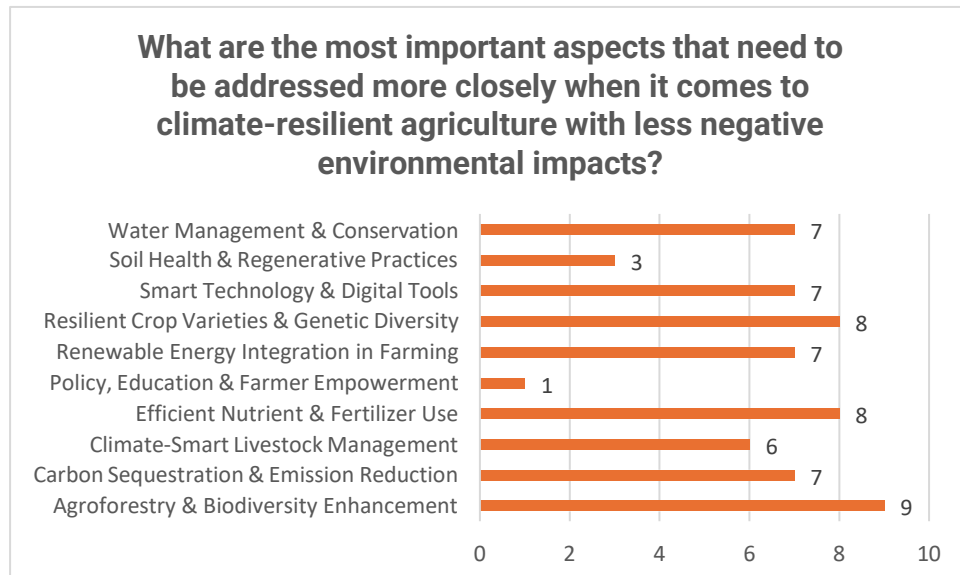


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Fields to Improve

What are the most important aspects that need to be addressed more closely when it comes to climate-resilient agriculture with less negative environmental impacts?

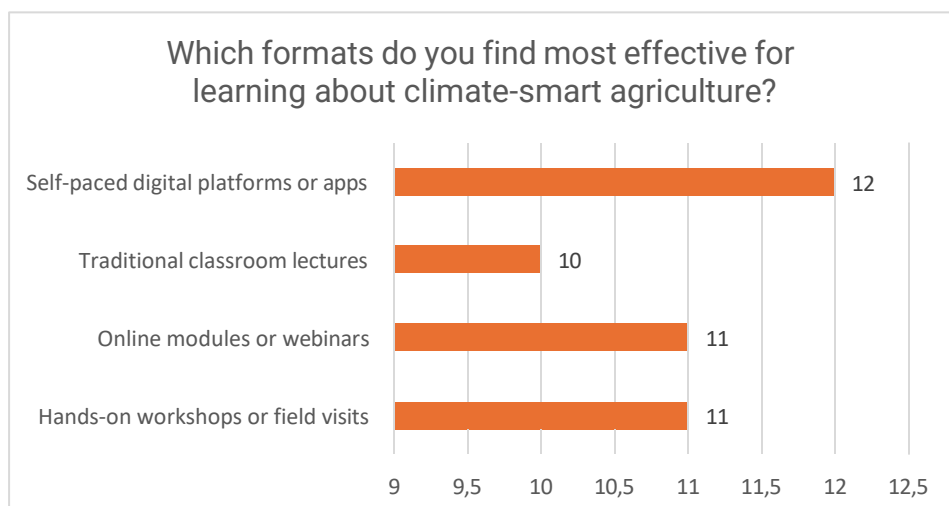
VET students most frequently chose these three options from the listed options: Agroforestry & Biodiversity Enhancement (9 responses), Efficient Nutrient & Fertilizer Use (8 responses), Resilient Crop Varieties & Genetic Diversity (8 responses). Renewable energy integration (7 responses) and carbon sequestration and emission reduction (7 responses) are also important, highlighting interest in cleaner energy and reducing greenhouse gases. Other key areas include water management (7 responses), smart technology (7 responses), and climate-smart livestock (6 responses). Overall, the priorities are fairly balanced, except for soil health & regenerative practices and policy and education & farmer support, which were chosen the least.



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Which formats do you find most effective for learning about climate-smart agriculture?

It can be stated that the respondents see benefits and advantages in using a variety of teaching methods and formats. The responses were distributed quite similarly across the selected forms, revealing that students, depending on the situation and the subject being taught, can gain knowledge both through traditional teaching methods and by using modern approaches such as learning apps or by practically visiting farms and learning on-site. The least valued learning method is traditional teaching method at classroom.

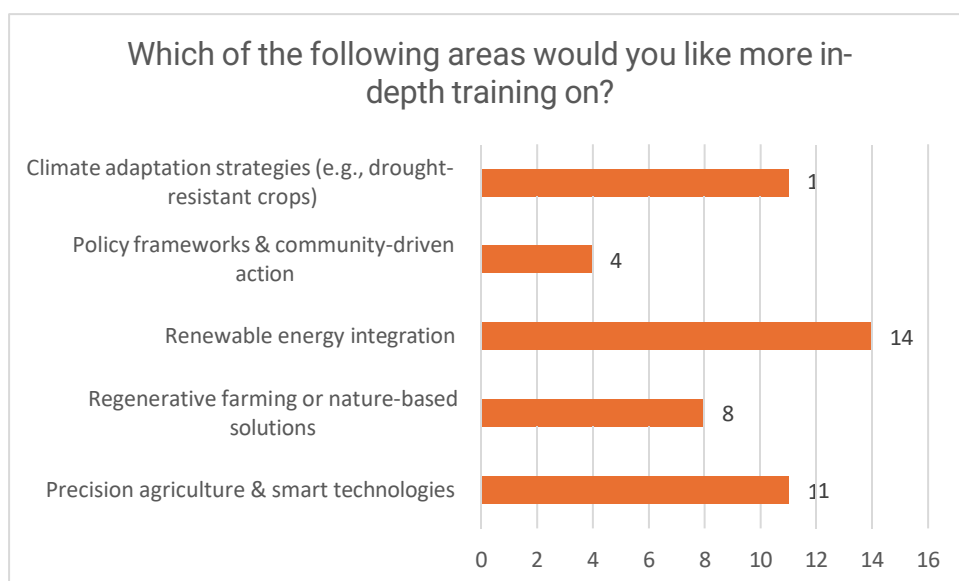


Which of the following areas would you like more in-depth training on?

The area with the highest interest for VET students is Renewable energy integration, chosen by more than half of respondents (14 responses). Precision agriculture and smart technologies also chosen quite a lot (11 responses), indicating a strong interest in digital tools and data-driven farming. Climate adaptation strategies (e.g., drought-resistant crops) (11 responses) are another key area of interest, showing that respondents want practical solutions to deal with changing climate conditions.

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Regenerative farming or nature-based solutions received moderate interest. The least selected option is Policy frameworks and community-driven action, which may indicate that young VET students prioritize practical and technological training over policy oriented approaches. The same trend in evaluating this statement was in VET educators group. In general, the results show a clear preference for practical, technology-focused, and solution-oriented training that can be directly applied on farms.



Challenges & Reflections

What skills or knowledge do you think are missing in your training that would better prepare you for climate-resilient agriculture?

More than half of respondents were not motivated to answer to open questions, leaving a blank space or answering that they “don’t know” or “don’t need anything specific”. About 20% answered that they need more practical training and to be provided practical examples.

In your experience, what are the biggest obstacles to learning or adopting climate-smart farming techniques?

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Respondents learners indicated these obstacles: lack of finances or financial support; lack of interest or lack of motivation; “lack of information, limited financial resources, and the complexity of applying new technologies on the farm”.

However, more than half of respondents didn't identify any obstacles in their answers.

What suggestions do you have for your institution or training program to improve climate-related agricultural education?

The main suggestions concerned to have more practical activities, real examples from farms, field trips, a focus on sustainable technologies, and collaboration with climate and agriculture specialists. It would also be useful to include training on financial support measures and adaptation strategies into training programmes.

Where do you see yourself in 5-10 years regarding climate-smart agriculture? (e.g., working on a sustainable farm, pursuing advanced research, being an advocate for regenerative practices, etc.)

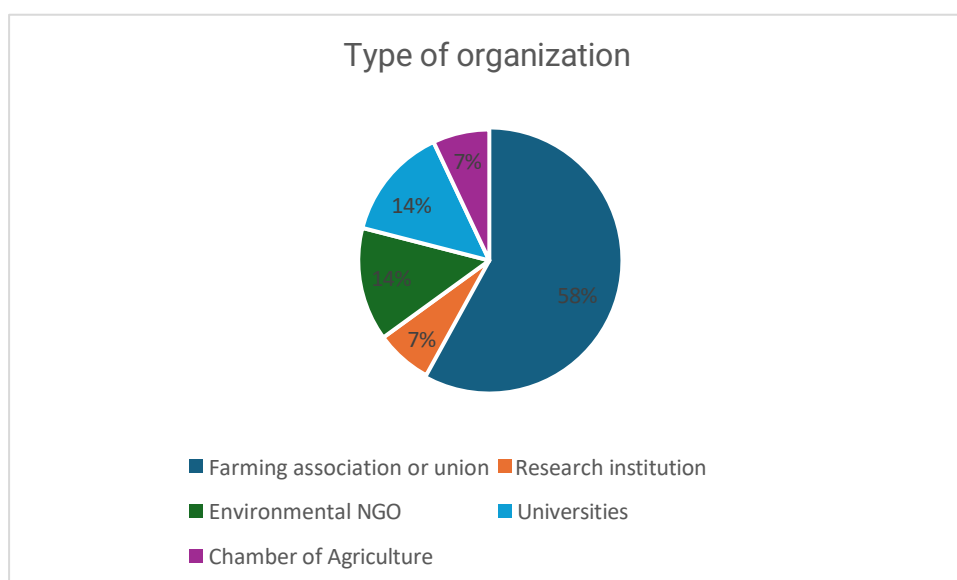
23% answered that they see themselves in climate-smart agriculture: to use renewable energy on the farm and remain competitive in the market; working on a sustainable farm using the latest technologies. Other students were not so sure about their future in farming.

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Stakeholders Questionnaires Analysis

General Information

14 stakeholder organizations participated in the survey and answered questions provided. The largest group of respondents came from farming associations or unions (58%). Smaller part represents environmental NGOs (14%) and universities (14%), followed by research institutions (7%) and Chambers of Agriculture (7%). Overall, the chart shows that most of the answers came directly from farming-related organizations, reflecting strong representation from the agricultural community.

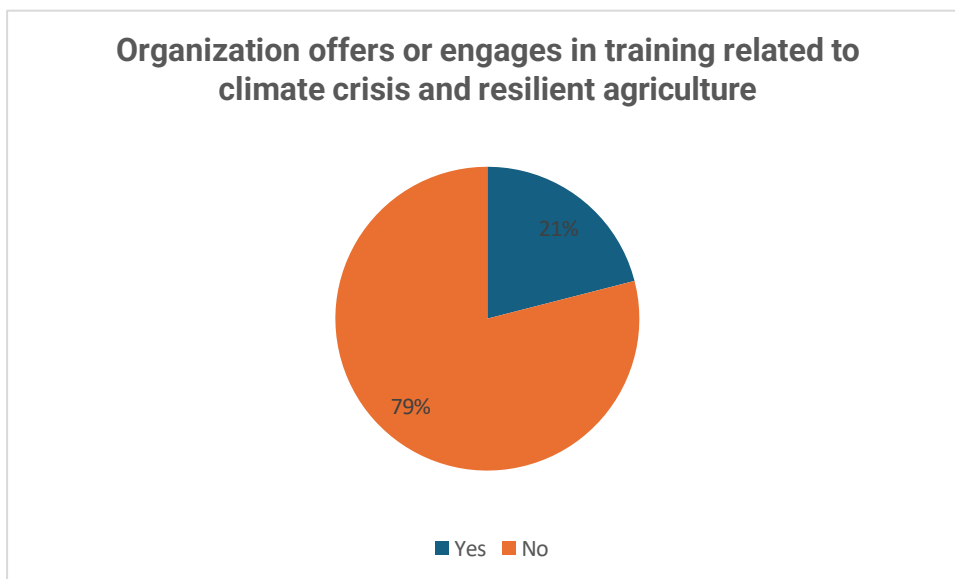


The most experienced stakeholder organizations participated in the survey: 85% of respondents represents institutions which have more than 20 years of experience in agriculture or environmental field. Only two organizations (NGO and farming union) are relatively new in the field. Overall, the survey shows that most participants are from experienced and well developed professional institutions.

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79% of participating stakeholders are active in providing themselves or participating in training related to climate-resilient agriculture. This shows that the topic is important and quite much attention is paid to it by of farming associations, NGO and universities.



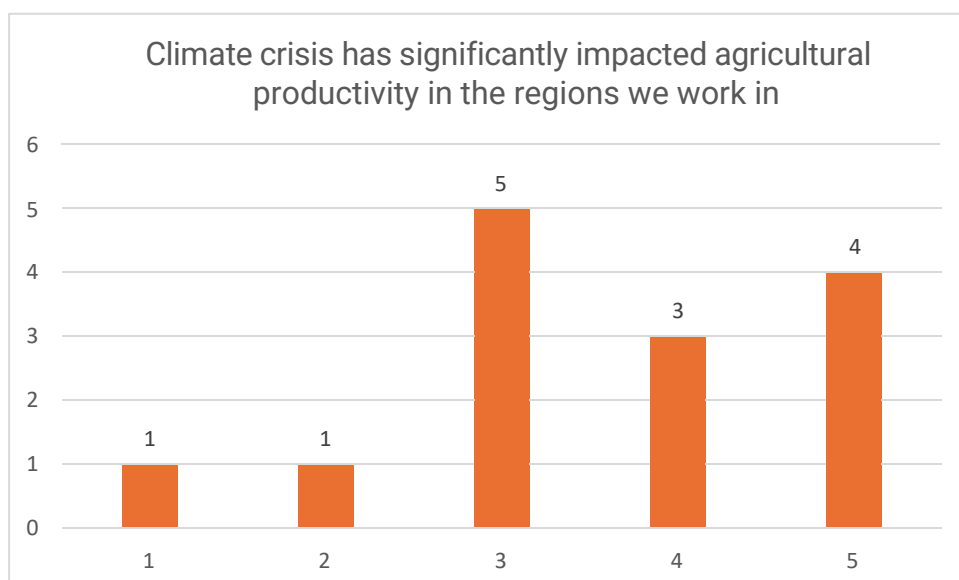
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Current situation

Climate crisis has significantly impacted agricultural productivity in the regions we work in.

The biggest part of respondents (86%) agree that the climate crisis has a noticeable effect and has significantly influenced agricultural productivity in their regions: 5 respondents (36%) rated it at 3, 3 respondents (21%) chose level 4 and 4 respondents (29%) rated it at level 5, showing strong agreement. Only 2 respondents each (14%) chose levels 1 and 2.

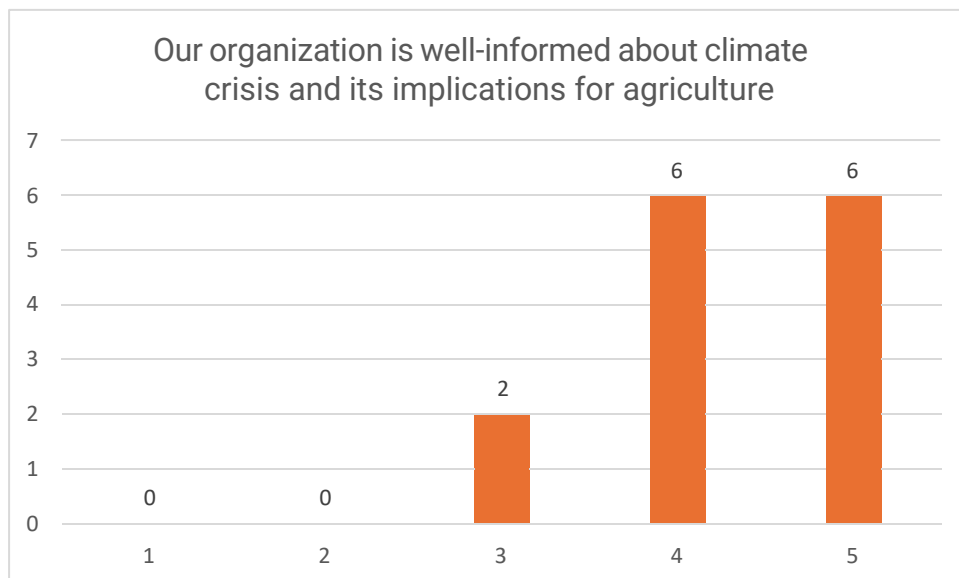


Our organization is well-informed about climate crisis and its implications for agriculture

The majority of respondents expressed confidence in their knowledge, with 6 respondents (43%) choosing level 4 and another 6 respondents (43%) selecting level 5, showing strong agreement. Only 2 respondents (14%) chose level 3, while none selected levels 1 or 2. Overall, the results indicate that most organizations consider that they are well-informed and aware of the agricultural implications of the climate crisis.

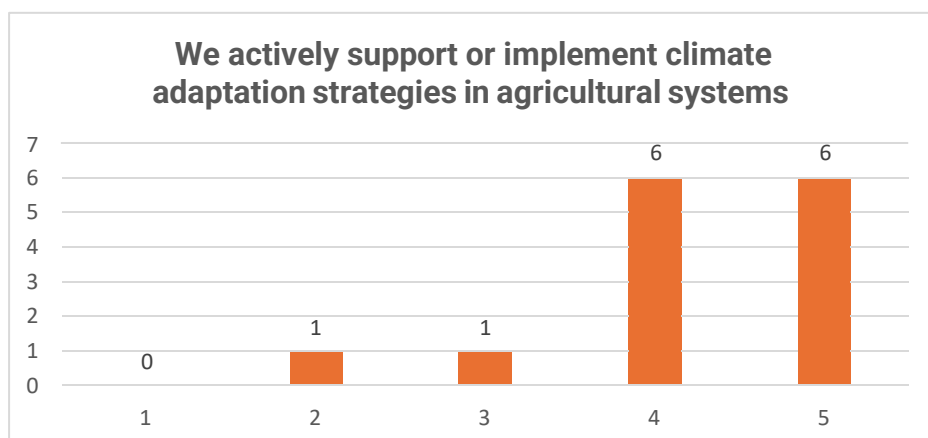
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We actively support or implement climate adaptation strategies in agricultural systems

The answers show that most organizations are actively engaged in or strongly support implementing climate adaptation strategies in agriculture: 6 respondents (43%) chose level 4 and another 6 respondents (43%) chose level 5. Only 1 respondent (7%) chose level 2 and 1 respondent (7%) level 3, while nobody selected level 1. It demonstrates that stakeholders have a strong institutional commitment to addressing issues of the impacts of climate change on agriculture in Lithuania.

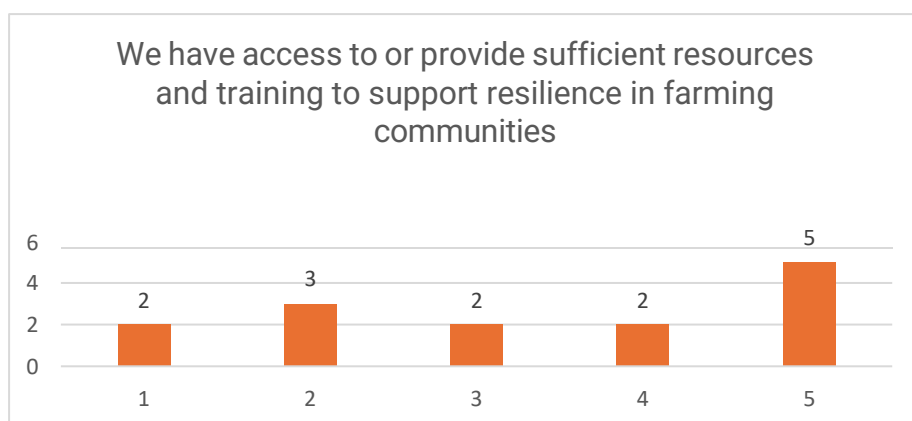


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We have access to or provide sufficient resources and training to support resilience in farming communities

The responses to this statement are mixed: 7 respondents (50%) strongly agree or agree with the statement (level 5 and 4), while 3 respondents (20%) chose level 2 and 2 respondents (15%) selected each of levels 1 and 3. This variation suggests that while some organizations have strong resource and training capacities, others still have limited resources and face limitations in providing adequate support and training for building agricultural resilience. This shows that further capacity-building efforts are needed to ensure consistent support for climate resilience in farming.

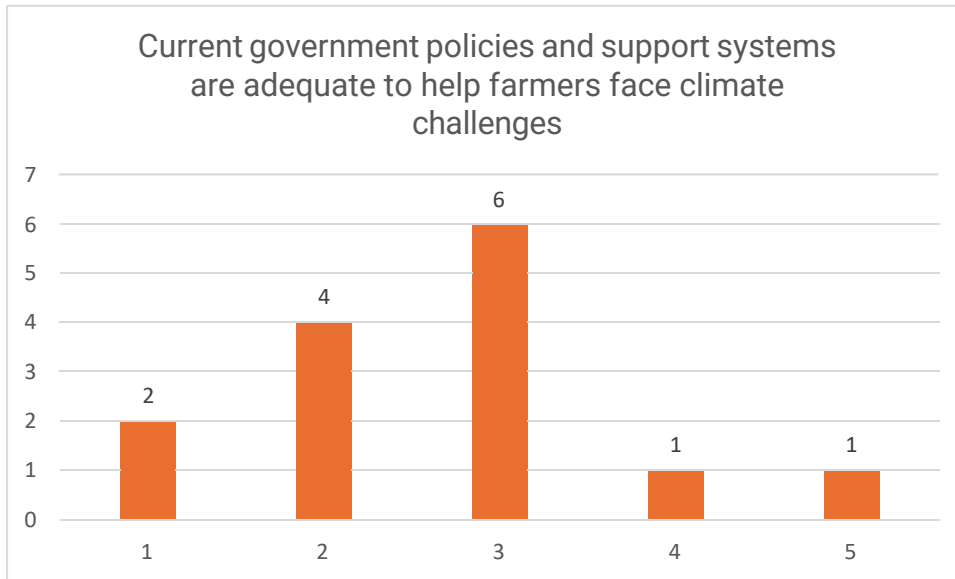


Current government policies and support systems are adequate to help farmers face climate challenges

Most responses provided are in the middle or lower part of the evaluation scale: 6 respondents (43%) chose level 3, and 4 respondents (29%) chose level 2, while 2 respondents (14%) selected level 1, indicating trend of dissatisfaction in regard to this issue. Only 1 respondent (7%) each selected levels 4 and 5. It indicates that most respondents believe that current government policies and support systems are insufficient to effectively help farmers cope with climate challenges, highlighting a need for stronger policy oriented action and support measures.

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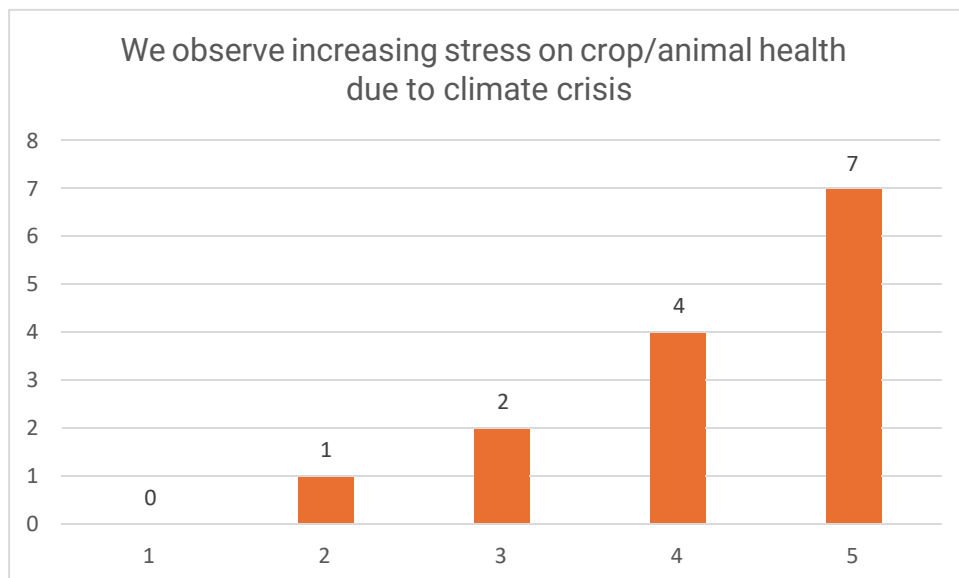


We observe increasing stress on crop/animal health due to climate crisis

The majority respondents strongly agree with this statement, with 7 respondents (around 50%) selecting level 5 and 4 respondents (29%) selecting level 4. Fewer respondents chose lower ratings: 2 (14%) selected level 3 and only 1 each (7%) chose levels 1 and 2. Most respondents clearly recognize that the climate crisis is placing increasing stress on both crop and animal health, indicating widespread concern about the growing vulnerability of agricultural systems.

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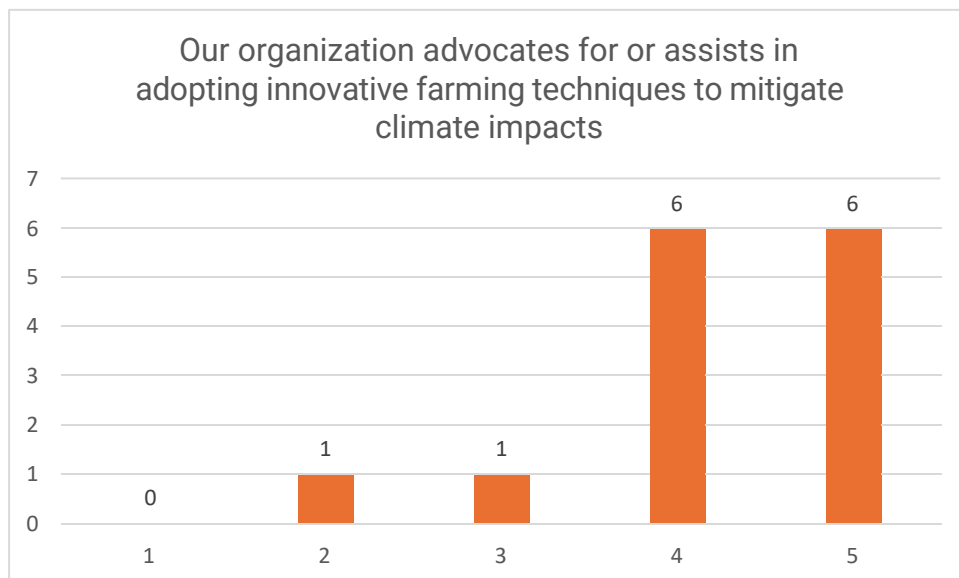


Our organization advocates for or assists in adopting innovative farming techniques to mitigate climate impacts

The majority of respondents expressed high agreement, with 6 respondents (43%) choosing level 4 and another 6 respondents (43%) selecting level 5. Only 1 respondent (7%) chose level 2 and 1 respondent (7%) answered “neutral”, while none selected level 1. Therefore, it can be stated that most stakeholder organizations are actively engaged in promoting or supporting the adoption of innovative farming methods, understanding the importance of organizations to contribute to mitigation of the effects of climate change in agriculture.

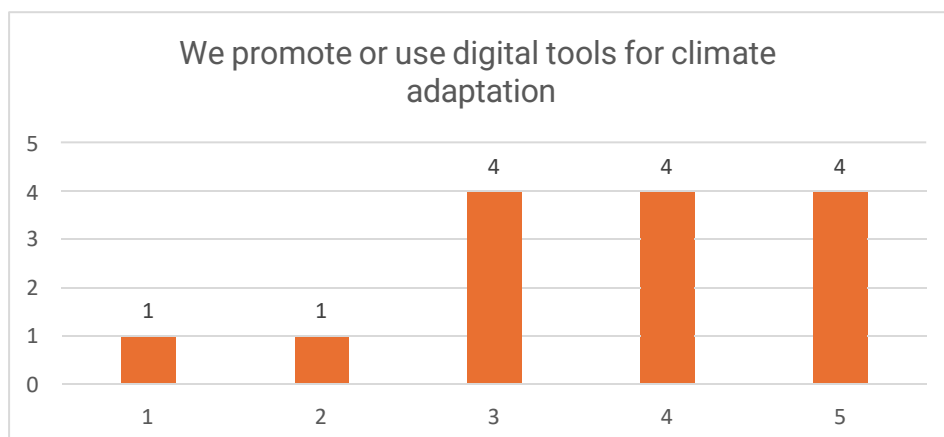
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We promote or use digital tools (e.g., remote sensing, monitoring apps, early warning systems) for climate adaptation

Most respondents have positive evaluation of this statement: 4 respondents (29%) chose level 3, 4 respondents (29%) selected level 4, and another 4 respondents (28%) chose level 5. Only 2 respondents (14%) selected level 1 and 2. The data indicate that a large part of organizations are integrating or promoting the use of digital tools for climate adaptation, reflecting growing recognition of technology’s role in building climate-resilient agricultural systems.

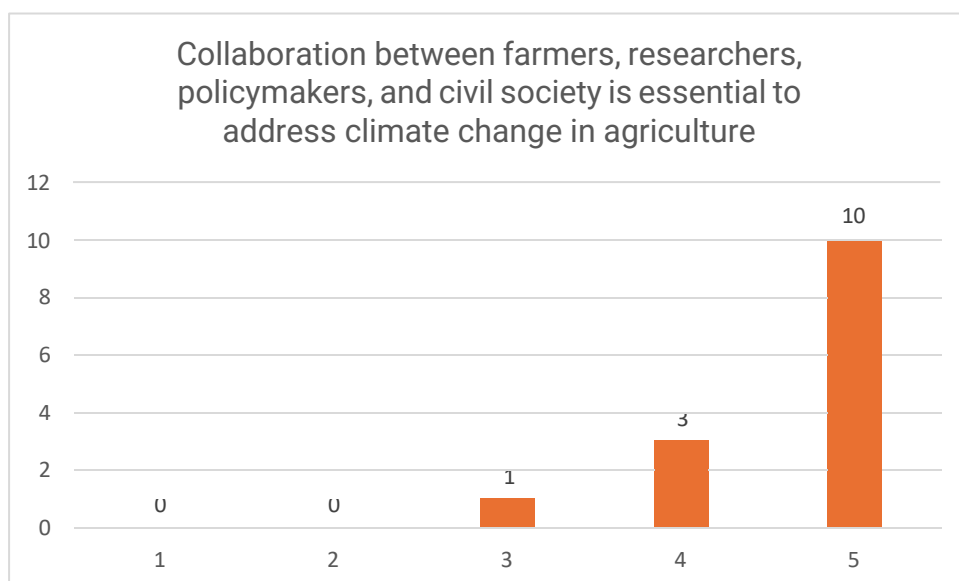


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Collaboration between farmers, researchers, policymakers, and civil society is essential to address climate change in agriculture

The results show very clearly that close collaboration among all key stakeholders is essential for effectively tackling climate change problems in the agricultural sector: 10 respondents (72%) strongly agree (level 5), and 3 respondents (21%) agree (level 4), while only 1 respondent (7%) selected level 3, and none chose lower levels.



Fields to Improve

What aspects need more attention to promote climate-resilient, environmentally sustainable agriculture?

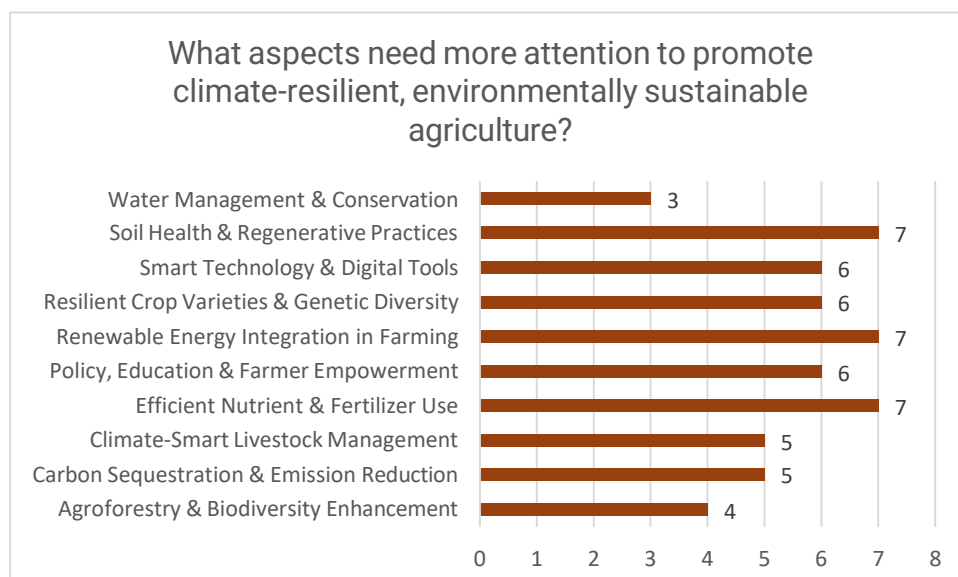
The highest priorities by the respondents were given to Soil Health & Regenerative Practices, Efficient Nutrient & Fertilizer Use, and Renewable Energy Integration in Farming, each selected by 7 respondents, showing strong interest in them. Smart Technology & Digital Tools; Policy, Education & Farmer Empowerment and Resilient Crop Varieties & Genetic Innovation followed closely with 6 responses, indicating recognition of the importance of digitalization, training and innovation. Climate-Smart

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Livestock Management and Carbon Sequestration & Emission Reduction each gathered 5 responses.

The priorities selected by most respondents suggest a growing recognition that long-term resilience depends on improving the health of agricultural ecosystems while using renewable energy in farming. The strong interest in smart technologies and resilient crop varieties reflects the sector’s readiness to use innovations and scientific advancement to cope with climate challenges. Also stakeholders agree that education and farmers’ empowerment is important in order to reach the goal of promoting climate-resilient, environmentally sustainable agriculture.



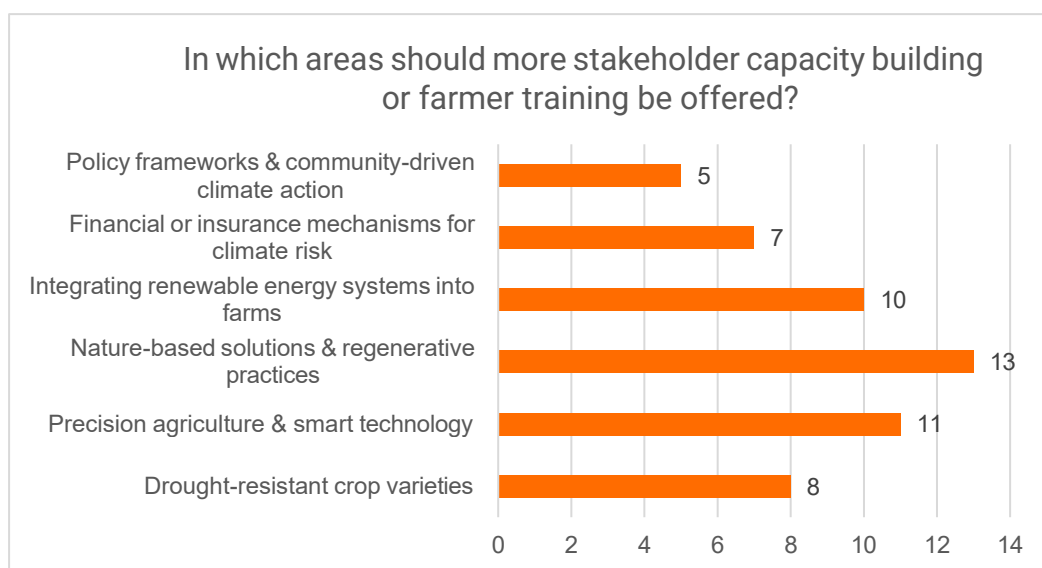
In which areas should more stakeholder capacity building or farmer training be offered?

Nature-based solutions and regenerative practices were selected by 13 respondents, showing strong recognition of the need to restore ecosystems and improve soil health. Precision agriculture and smart technology was chosen by 11 respondents, integrating renewable energy systems into farms was also highlighted, with 10 responses. Moderate attention was given to drought-resistant crop varieties (8 responses) and

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financial or insurance mechanisms for climate risk (7 responses). The lowest priority was given to policy frameworks and community-driven climate action (5 responses). Stakeholders identify that for them or farmers more training in regenerative practices, precision technologies, and renewable energy is important. At the same time, financial knowledge and policy development should not be overlooked, as they are essential to ensuring sustainable practices in farming.

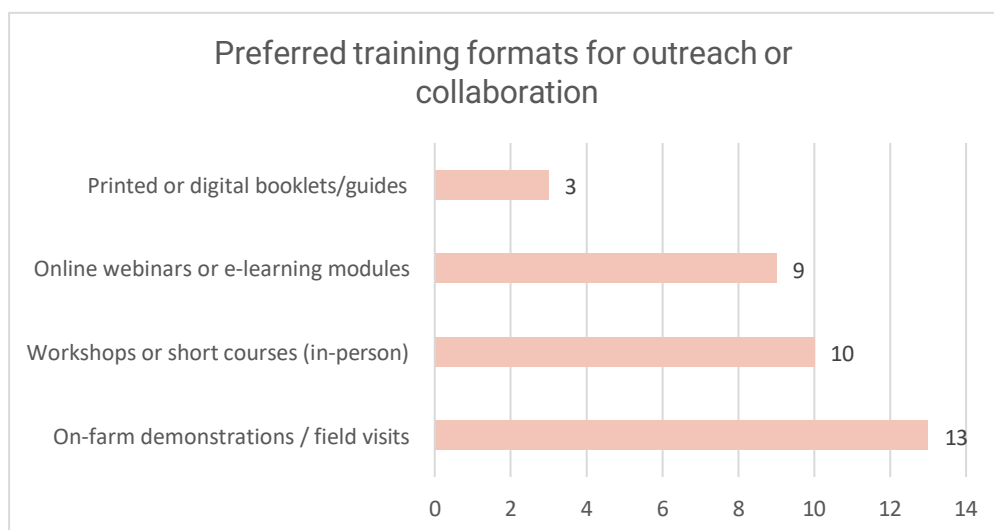


Preferred training formats for outreach or collaboration

The most popular choice is on-farm demonstrations and field visits, selected by 13 respondents, showing a strong preference for practical, hands-on learning experiences. Workshops or short in-person courses are also highly valued (10 respondents), emphasizing the importance of interactive and face-to-face engagement. Online webinars or e-learning modules follow closely with 9 responses.

The least preferred format is printed or digital booklets/guides (3 respondents). Respondents clearly favor interactive, practical, field-based learning formats that allow them to directly observe and apply sustainable farming practices.

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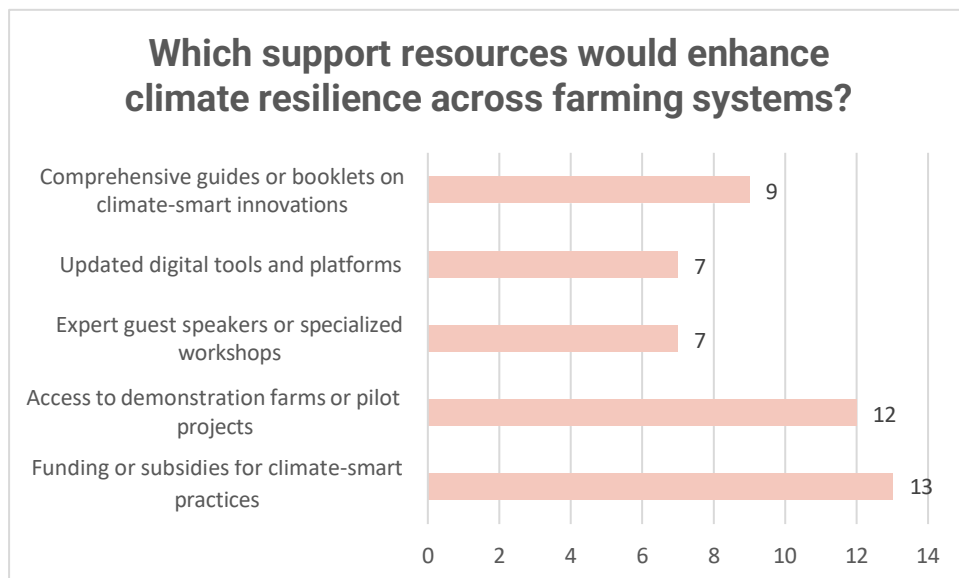
Which support resources would enhance climate resilience across farming systems?

The top priorities are funding or subsidies for climate-smart practices (13 responses) and access to demonstration farms or pilot projects (12 responses), showing that financial assistance and practical, hands-on learning opportunities are viewed as essential for fostering real change. Comprehensive guides or booklets on climate-smart innovations also evaluated highly (9 responses), indicating a demand for practical, well-prepared educational materials.

However, updated digital tools and platforms and expert guest speakers or specialized workshops were evaluated as less useful in comparison to other resources (each received 7 responses). The results highlight that stakeholders see the combination of financial support and practical learning as the most powerful resources for climate resilience in agriculture.

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Challenges & Reflections

What are the biggest challenges your organization sees in helping farmers adapt to climate change?

Stakeholders identified several challenges that hinder progress toward climate-resilient agriculture: funding limitation, farmers' unwillingness to change and accept innovations, low motivation to participate in trainings, excessive bureaucracy. Limited funding restricts the implementation of innovative practices, while farmers' reluctance to change and low motivation to engage in training slow the adoption of new technologies and practical changes in farms.

What types of support or collaboration (e.g., policy reform, training programs, funding, networking) would help address these challenges?

Stakeholders identified these support and collaboration types which can help addressing challenges: clearer information on subsidies; high-quality and practical trainings and effective dissemination of information about training opportunities; networking and communication of different social partners and the governmental sector (Ministry of Agriculture, Ministry of Environment) into a joint competence

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network what can result in political reforms useful for agriculture; political decisions that would empower (and oblige) farmers to improve their competences, encourage their motivation to learn and adopt new practices – for example, by establishing a requirement to complete a certain number of training hours each year in order to receive direct payments or similar support.

Has your organization supported or observed any successful adaptation methods or technologies? If so, please share what worked (or didn't) and why.

When asked if they had supported or observed any successes in adapting to climate change, 4 respondents said “none so far”, while the rest reported various examples. 3 respondents as the most successful practices reported those that received additional financial support: for example, no-till farming has become widely adopted because it is supported by EU support (direct payments). One respondent reported success on growing cover crop mixtures and leaving them over the winter; simplified soil cultivation.

Looking ahead, what new climate-related risks or opportunities do you foresee in agriculture over the next 5–10 years?

A few identified opportunities: facilitate the introduction of new crop varieties and plant protection products to the market, and promote more comprehensive scientific research leading to practical, evidence-based recommendations, support the wider use of new technologies and the systematic application of research-based practical solutions. Risks mentioned: excessive fertilizer use; management and restructuring of land reclamation (drainage) systems; increasing heat or unpredictable extremes of temperature and drought stress on plants.

The warming climate and increasingly frequent extreme weather events will force some farmers who are unwilling to adopt new practices to withdraw from production, leading to a further decline in rural populations. It is necessary to invest in precise

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meteorological forecasting, resilient crop varieties, irrigation and drainage systems, develop biological protection methods, build knowledge about emerging pathogens, and ensure rapid and targeted responses to new challenges.

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