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

WP2

Needs Analysis National Report

Greece

Project Partners

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

(2024-1-LT01-KA220-VET-000248582)

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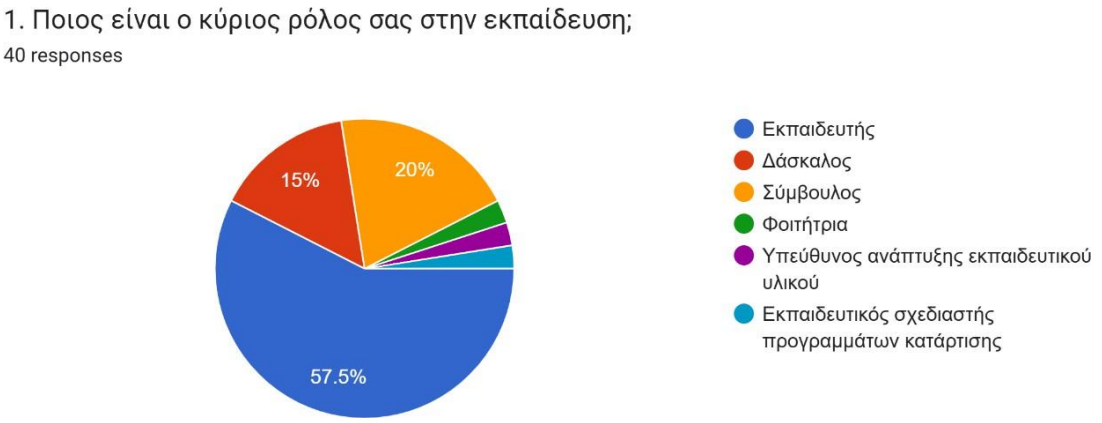
Educators Questionnaires Analysis

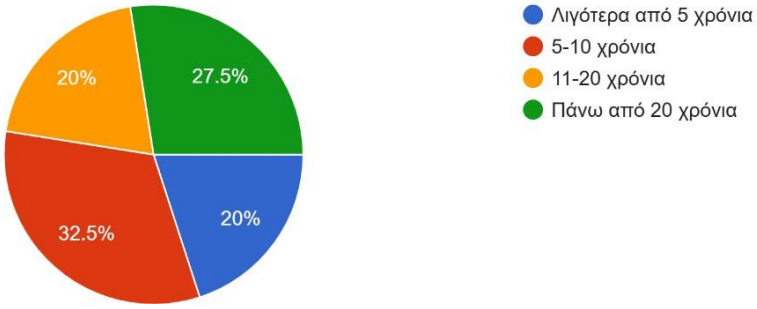
General Information

The educators' sample consists of 40 respondents involved in agricultural education and training in Greece. A majority (23 respondents, 57.5%) work in vocational education (VET), while the rest are distributed among universities (20%), research centres (10%), private training providers (7.5%), and other institutions (5%). This confirms that VET educators dominate the sample, but academic, research and private training perspectives are also represented.

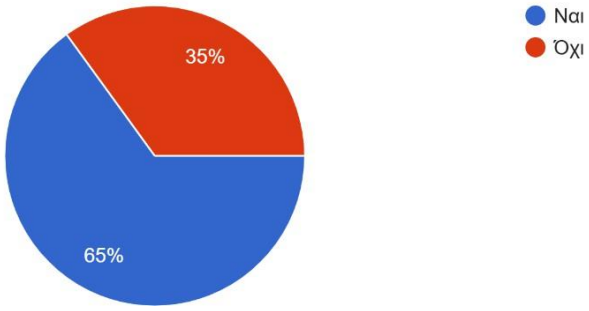


Most respondents are experienced professionals: 25 educators (62.5%) have over 10 years of teaching experience, 11 educators (27.5%) have 5–10 years, and 4 educators (10%) have less than 5 years of experience. This indicates a mature workforce with considerable field and classroom experience.

2. Πόσα χρόνια ασχολείστε με την εκπαίδευση ή κατάρτιση στον αγροτικό τομέα;
40 responses



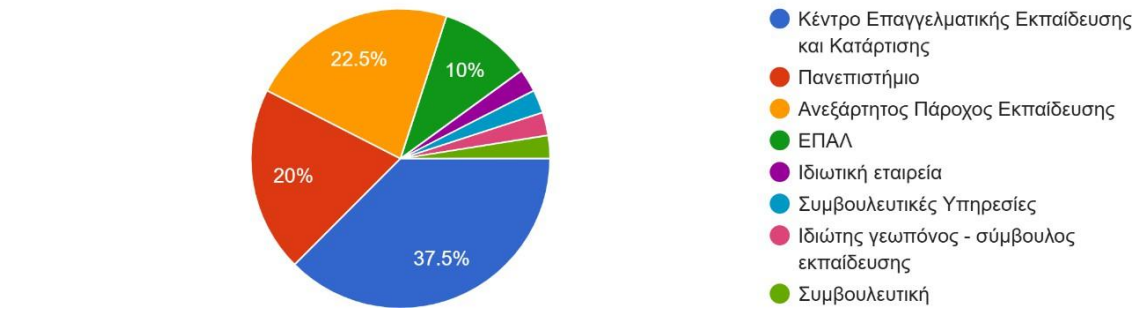
3. Έχετε παρακολουθήσει κατάρτιση σχετικά με την προσαρμογή ή μετριασμό της κλιματικής κρίσης στη γεωργία;
40 responses



Regarding their personal exposure to training on climate change adaptation and mitigation in agriculture, 65% of the respondents have already attended such training, while 35% have not yet participated in any form of climate-related capacity building. This indicates that, while a majority has some relevant background knowledge, there remains significant space for further professional development in this field.

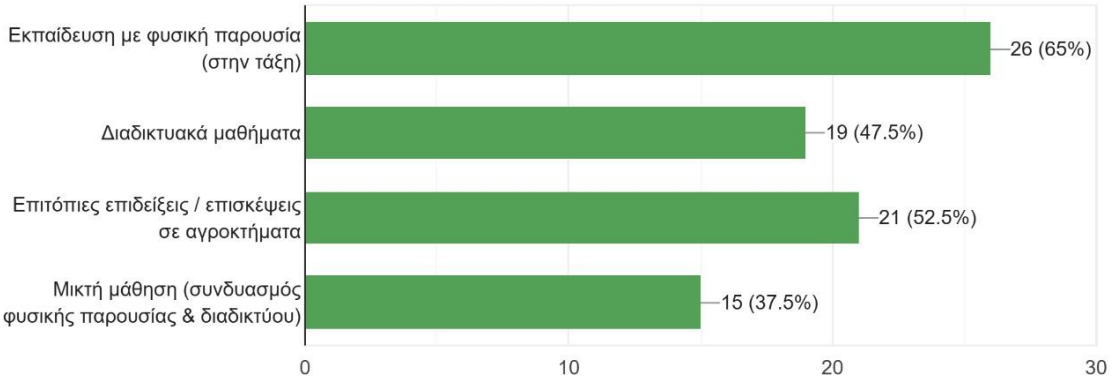
4. Σε τι είδους εκπαιδευτικό φορέα εργάζεστε;

40 responses



5. Ποια μορφή εκπαίδευσης χρησιμοποιείτε κυρίως; (παρακαλούμε επιλέξτε όλες όσες ισχύουν):

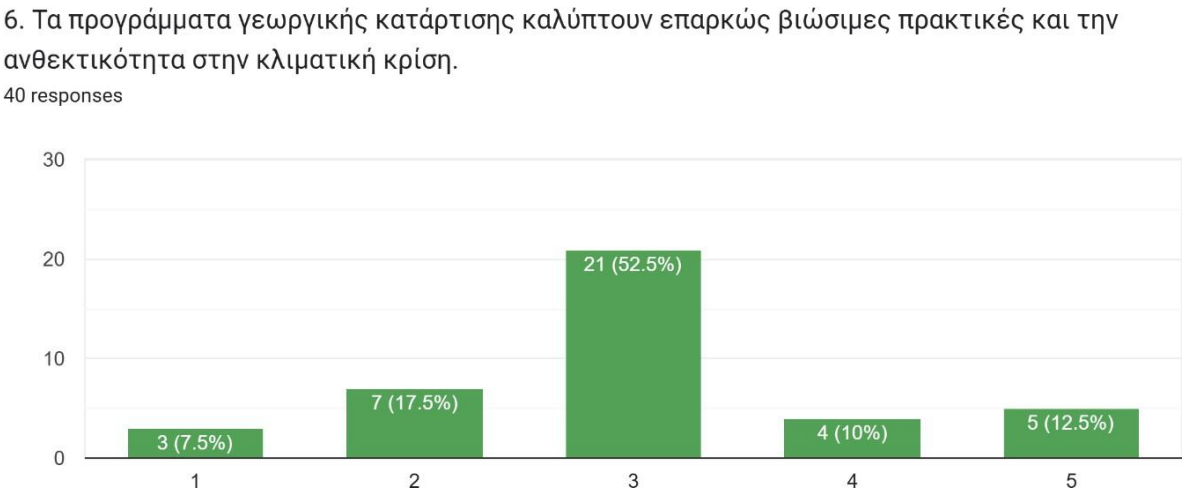
40 responses



In terms of the teaching methods they currently apply, the majority of educators (65%) rely primarily on in-person classroom-based instruction. Online teaching is also widely used, applied by 47.5% of respondents. More than half (52.5%) incorporate practical, field-based activities such as visits, demonstrations and outdoor exercises into their teaching, while 37.5% have adopted blended learning approaches that combine online and face-to-face methods. This suggests that while traditional classroom instruction remains dominant, there is a growing tendency towards the use of digital and practical learning formats in agricultural education.

Current situation

When educators were asked whether agricultural training programmes adequately cover sustainable practices and climate resilience, responses revealed a rather moderate assessment. The majority (52.5%) placed themselves at the middle of the scale (score 3), while only a small minority expressed strong confidence, with 10% giving a score of 4 and 12.5% a score of 5. On the contrary, 25% of respondents selected low levels of satisfaction, with 7.5% assigning the lowest score of 1 and 17.5% choosing 2. The overall picture suggests that while some content related to climate resilience is included, comprehensive integration into agricultural curricula remains limited.



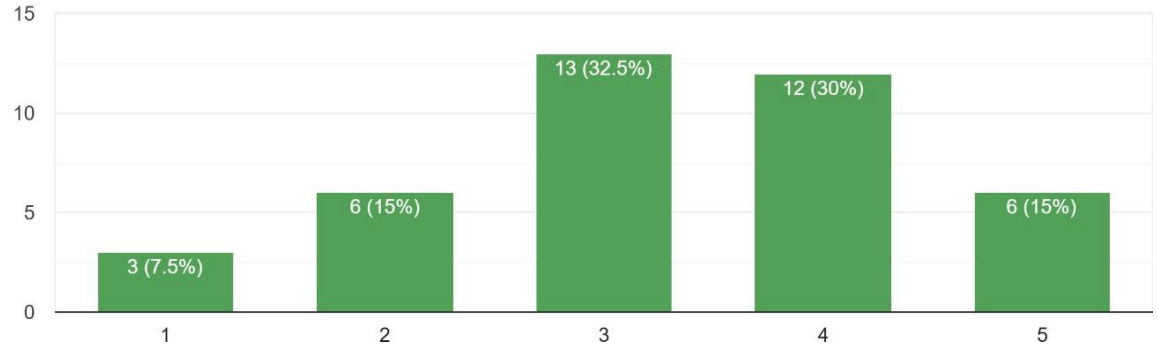
In relation to whether climate change education constitutes a core part of their programme, educators' views were again divided. The majority leaned towards a positive assessment, with 40% selecting a score of 4 and 15% selecting 5. However, 20% opted for the neutral midpoint, while 25% rated their programmes negatively

(22.5% selecting 2 and 2.5% selecting 1). This demonstrates that, although climate education is present in several curricula, many educators still perceive it as not being fully embedded.

Educators were asked to evaluate their own confidence when teaching about climate change and its impacts on agriculture. Here, the overall self-assessment was moderately positive. While 30% selected a score of 4 and 15% selected 5, 32.5% positioned themselves neutrally at 3. However, 22.5% of educators expressed lower levels of confidence, selecting scores of 1 or 2. Although most educators feel comfortable with the subject, a significant minority still feel uncertain about their level of expertise.

8. Αισθάνομαι σιγουριά όταν διδάσκω για την κλιματική κρίση και τις επιπτώσεις της στη γεωργία.

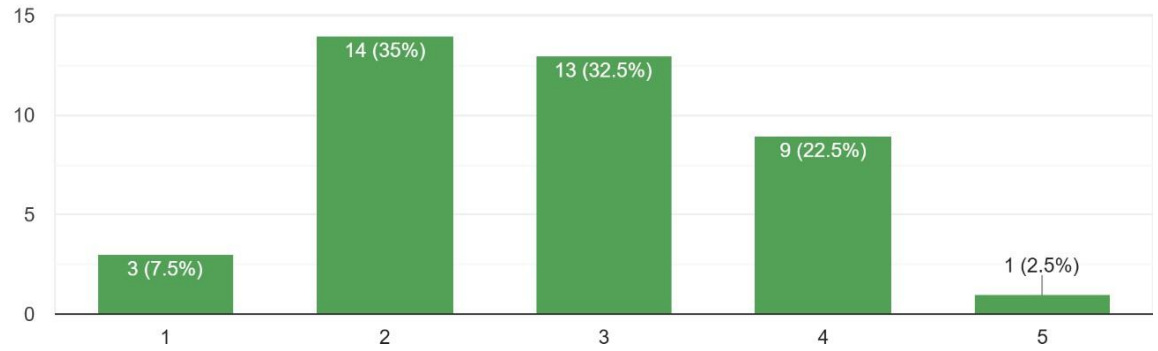
40 responses



In terms of the adequacy of available teaching materials supporting climate-related education in agriculture, the responses revealed widespread dissatisfaction. A significant share of respondents (35%) assigned a score of 2 and another 32.5% were neutral. Only a minority of 22.5% selected positive scores (4 and 5 combined), while 7.5% rated the availability of materials at the lowest level. These results underline that the shortage of updated, relevant and easily accessible teaching resources remains a substantial barrier for educators.

9. Υπάρχουν επαρκή εκπαιδευτικά υλικά που υποστηρίζουν την εκπαίδευση για την κλιματική κρίση στη γεωργία.

40 responses

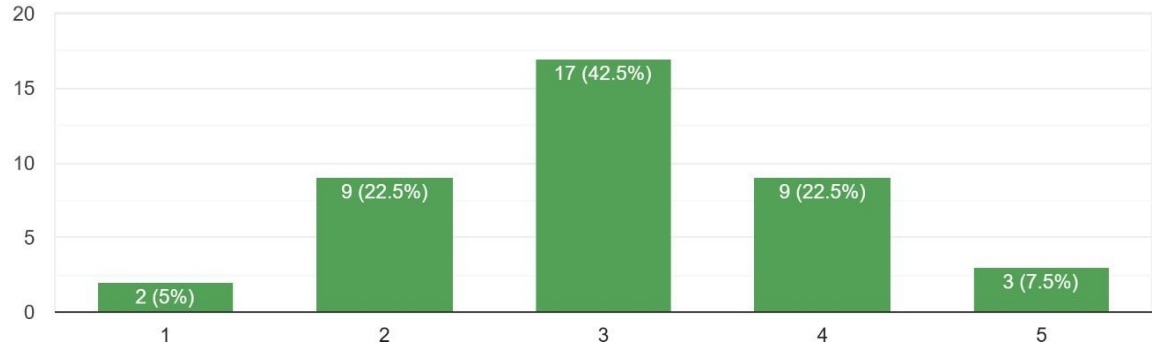


When asked whether they collaborate with farmers and sectoral stakeholders to better understand real-life challenges, 47.5% of the educators rated their collaboration at level 4, while 15% rated it at 5. Nevertheless, 20% remained neutral, and 17.5% selected lower scores (1 and 2), indicating that although many educators maintain active links with the field, there is still a considerable portion who lack strong connections with practitioners.

Regarding institutional support for professional development on climate-related topics, educators generally expressed moderate satisfaction. 42.5% assigned the neutral score of 3, while 22.5% were positive, assigning scores of 4 and 5. However, 27.5% selected the lower scores of 1 or 2, indicating that many educators feel their institutions provide insufficient support for continuous learning on climate-related issues.

11. Ο οργανισμός μου παρέχει επαρκή υποστήριξη για την επαγγελματική μου ανάπτυξη σε θέματα που σχετίζονται με το κλίμα.

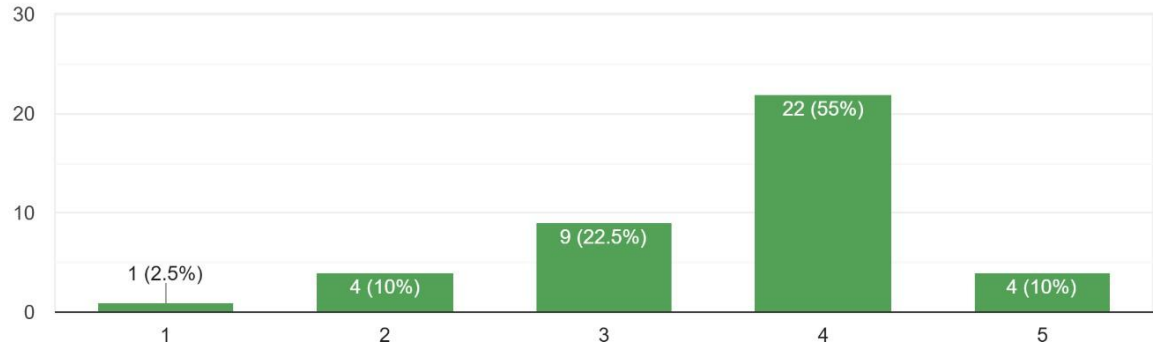
40 responses



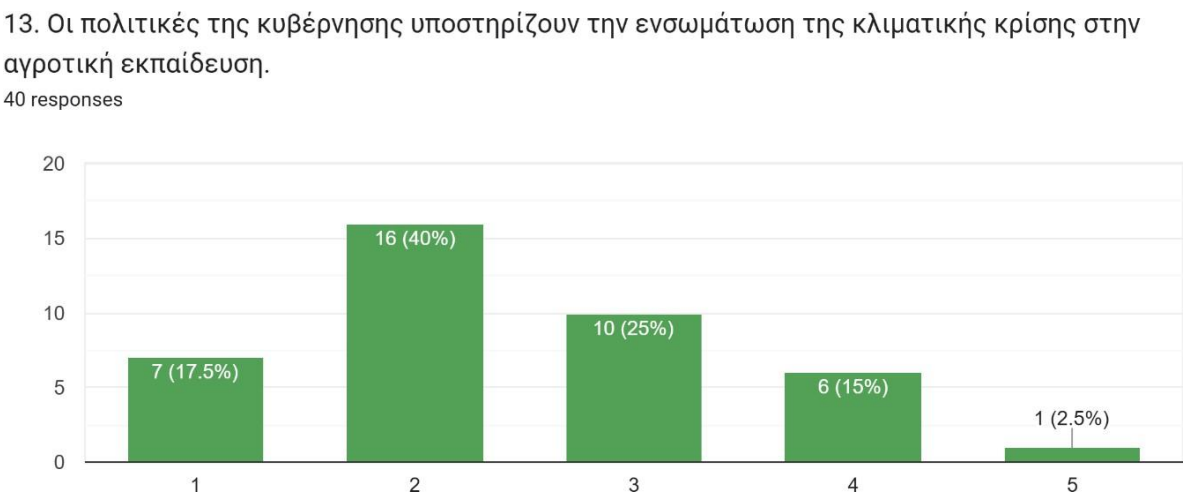
The educators were also invited to evaluate their learners' interest in sustainable farming and climate resilience. A large majority, 55%, rated the learners' interest highly at level 4, while 10% chose level 5. On the other hand, 22.5% were neutral, while only 12.5% indicated low levels of student interest. This indicates a rather strong willingness among learners to engage with climate-resilient agriculture topics.

12. Οι εκπαιδευόμενοι δείχνουν έντονο ενδιαφέρον για βιώσιμη γεωργία και ανθεκτικότητα στο κλίμα.

40 responses



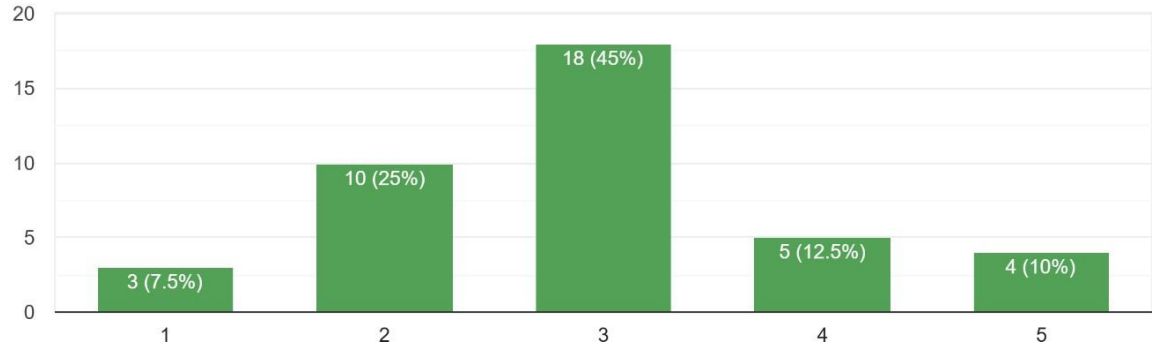
When asked whether national policies support the integration of climate change education into agricultural training, responses were noticeably less optimistic. 40% of educators rated this support at level 2, while 17.5% chose the lowest score of 1. A quarter of respondents selected the neutral score of 3, while only 17.5% gave positive scores (4 or 5). These findings point to a widely shared perception that governmental policy frameworks are still insufficient to facilitate systematic climate education integration.



On the question of whether adequate practical training exists to support the teaching of effective climate adaptation strategies, most educators remained reserved. 45% selected the neutral score of 3, while 25% assigned a score of 2 and 7.5% rated it at the lowest level. Only 22.5% of respondents were positive (scores 4 and 5), highlighting the need for stronger investment in field-based and experiential training infrastructure.

14. Υπάρχει επαρκής πρακτική εκπαίδευση για τη διδασκαλία αποτελεσματικών στρατηγικών προσαρμογής στο κλίμα.

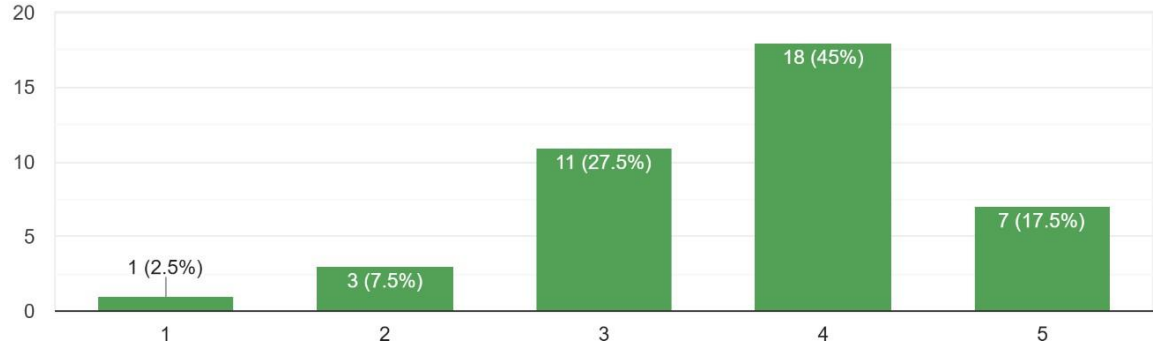
40 responses



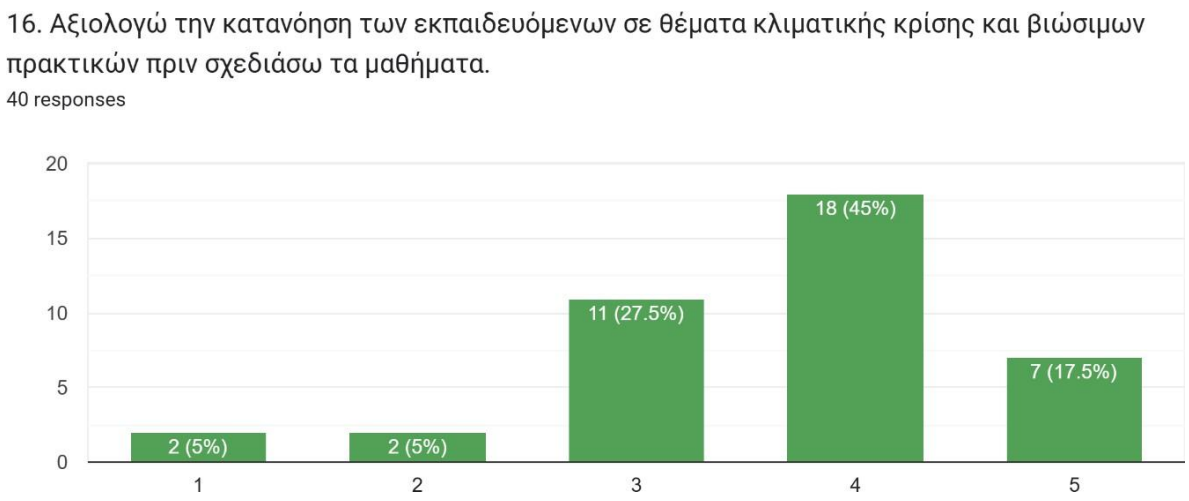
When considering whether farm visits or on-site demonstrations are an established part of their training activities, the responses were moderately encouraging. A total of 45% rated these activities at level 4, and 17.5% at level 5. However, 27.5% were neutral and 10% gave lower scores (1 and 2 combined), indicating that while many educators do offer real-life exposure opportunities, there is still variability in how widely this is practiced.

15. Οι επιτόπιες επισκέψεις ή οι επιδείξεις σε αγροκτήματα είναι βασικό μέρος της κατάρτισής μου.

40 responses



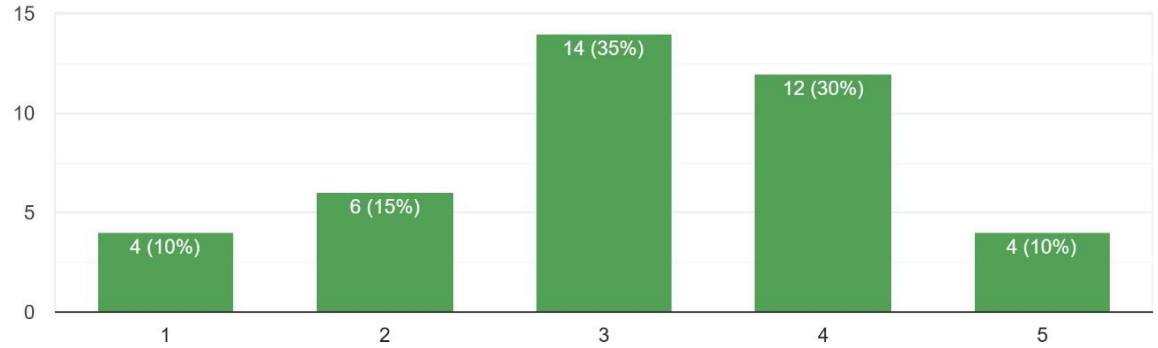
Educators were also asked to assess how much they evaluate their learners' understanding of climate crisis issues before designing their lessons. Almost half of the respondents (45%) rated this at level 4, and 17.5% at level 5, suggesting a fairly widespread practice of adapting content to learners' prior knowledge. Nonetheless, 27.5% selected the neutral score of 3, while 10% rated this practice lower, indicating that for some educators, systematic pre-assessment of learners' knowledge is not yet standard.



Finally, when asked about their level of collaboration with local, national or international agricultural organisations to update their training content, educators provided more cautious responses. While 42.5% selected the neutral score of 3, and 30% gave a score of 4, only 15% rated their collaboration at level 5. At the same time, 12.5% selected low scores (1 or 2). This suggests that while collaboration does take place, stronger and more systematic partnerships with external stakeholders could further enrich training content.

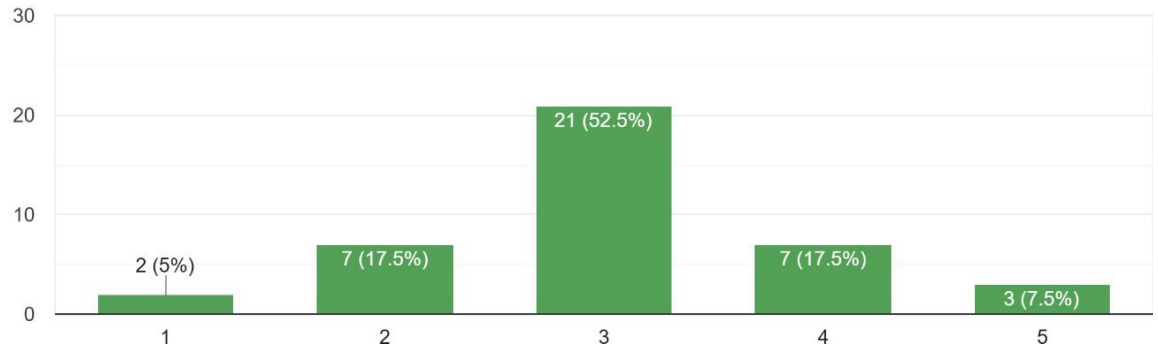
Educators were also asked whether they make use of digital platforms and technologies, such as satellite data or precision farming applications, to explain climate adaptation strategies in agriculture. The responses reveal that such digital integration is still developing. The largest share of respondents (35%) selected the neutral score of 3, while 30% gave a score of 4 and 10% assigned the highest score of 5. On the other hand, 25% of the educators expressed limited use of such tools, selecting scores of 1 or 2. These results indicate that while a growing number of educators have started to incorporate advanced digital technologies into their teaching, a significant proportion has not yet fully adopted these modern tools, suggesting an area of high potential for capacity building and resource development.

18. Χρησιμοποιώ ψηφιακές πλατφόρμες ή τεχνολογίες (π.χ. δεδομένα δορυφόρου, εφαρμογές γεωργίας ακριβείας) για να εξηγήσω επιπτώσεις...στρατηγικές προσαρμογής στην κλιματική κρίση.
40 responses



Finally, educators were asked whether they are informed about policy incentives or subsidies that encourage farmers to adopt climate-smart practices. The answers showed moderate levels of awareness. More than half of the respondents (52.5%) selected the neutral score of 3, while only 17.5% rated their knowledge positively at level 4 and 7.5% at level 5. On the other hand, 22.5% indicated limited awareness, selecting scores of 1 or 2. These results suggest that while some educators are familiar with relevant policy frameworks, many remain only partially informed about available policy tools and financial instruments supporting climate-resilient agriculture.

19. Είμαι ενήμερος/η για πολιτικά κίνητρα ή επιδοτήσεις που ενθαρρύνουν τους αγρότες να εφαρμόσουν κλιματικά έξυπνες πρακτικές.
40 responses



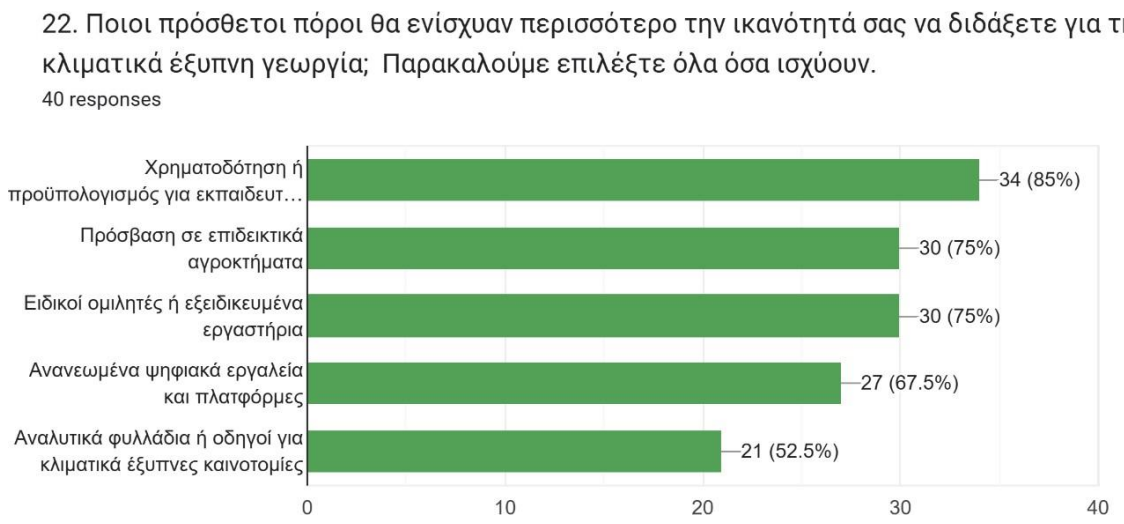
Fields to Improve

When asked to prioritise which areas should receive greater emphasis in building climate-resilient agriculture, the majority of educators pointed to the need for stronger policy, education and farmer-centred interventions, with 70% selecting this option. Carbon capture and emission reduction also emerged as a key priority, selected by 42.5% of respondents, followed by agroforestry and biodiversity enhancement with 37.5%. Soil health and regeneration was highlighted by 50% of participants, while other areas such as climate-smart livestock management (22.5%), water management (25%), smart technology (25%), renewable energy integration (15%), fertiliser efficiency (10%), and drought-resilient varieties (27.5%) were also identified, though to a lesser extent. This distribution suggests that while educators recognise the importance of both technological and nature-based solutions, they place particular importance on policy, education, and carbon management as fundamental pillars for building resilience.

Educators were also asked to identify in which areas they would personally desire more in-depth training. The most frequently selected topics were equally shared between two domains: resilient crop varieties and precision agriculture technologies,

both receiving 70% of responses. Nature-based and regenerative solutions followed closely, selected by 62.5% of respondents. Policy support and action frameworks were selected by 57.5%, while advanced tools and digital instruments were chosen by 52.5%. Financial instruments and insurance mechanisms were selected by 45%, as was the integration of renewable energy systems into farming. These preferences reflect educators' desire to strengthen their expertise across a broad spectrum of both technical and systemic topics that support climate-smart agriculture.

Finally, when asked which resources would most improve their ability to teach climate-smart agriculture effectively, educators clearly emphasised the need for financial support, with 85% indicating that additional funding or dedicated budgets for climate education would be the most impactful measure. Access to demonstration farms and specialised workshops were each selected by 75% of respondents, while updated digital tools and platforms were chosen by 67.5%. Comprehensive guides or handbooks on climate innovations were also viewed as helpful, with 52.5% selecting this option. This strong emphasis on both financial and technical support highlights that educators see not only a need for more knowledge, but also for the material infrastructure and funding necessary to apply that knowledge in practice.



Challenges & Reflections

When invited to reflect on the challenges they face in delivering climate-resilient agricultural education, educators highlighted a combination of systemic, institutional, pedagogical and technical barriers. One of the most frequently mentioned challenges concerns the lack of specialised, up-to-date teaching materials that are adapted to national or Mediterranean conditions. Many educators noted that existing resources are often outdated, theoretical or fragmented, and do not sufficiently incorporate the practical examples and applied knowledge required to train learners on complex issues such as climate adaptation, precision agriculture, or regenerative practices.

Another recurrent obstacle identified was the limited institutional support for curriculum development and continuous professional development. Educators referred to the absence of coordinated national strategies and the lack of stable funding to support training, staff upskilling and access to specialised equipment or field-based facilities. This is further exacerbated by insufficient cooperation and

networking opportunities between educational institutions, research organisations, technology providers and farming communities, which restricts the practical exposure of both educators and students to real-world climate-smart farming solutions.

The limited availability of digital tools and modern technologies, as well as educators' varying levels of familiarity with these tools, was also repeatedly mentioned. Several educators indicated that although digitalisation and precision technologies are rapidly advancing, many teachers lack adequate training or experience in using advanced tools such as remote sensing applications, sensors, weather-based data platforms and digital farm management systems. As a result, their capacity to integrate modern technologies into teaching remains restricted.

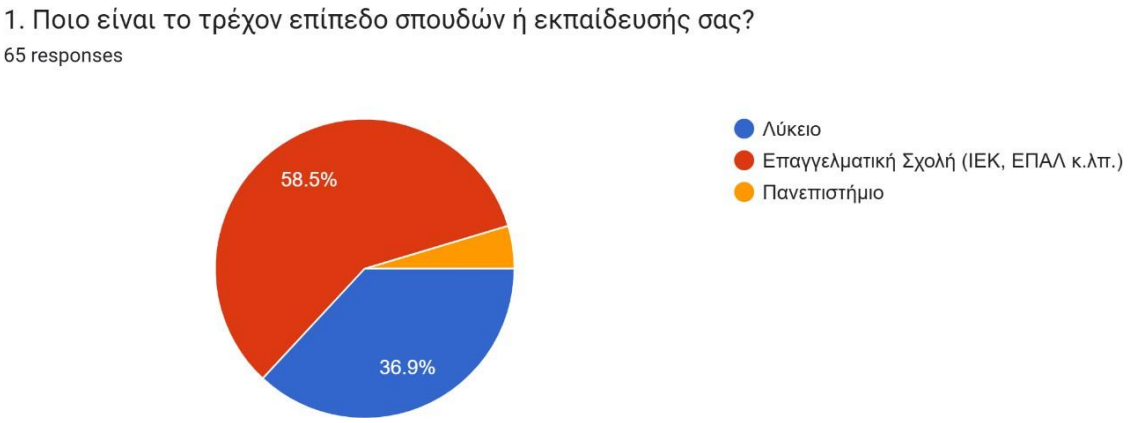
Furthermore, educators pointed to the need for more systematic cooperation with policy-makers and local authorities in order to strengthen policy-related knowledge and ensure that their training programmes reflect actual policy frameworks, financial incentives, and climate support measures available to farmers.

Finally, a few educators also 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. This reinforces the need for better learner preparation and for practical, engaging, real-world educational formats that can motivate students and demonstrate the relevance of climate-smart farming in practice.

Learners Questionnaires Analysis

General Information

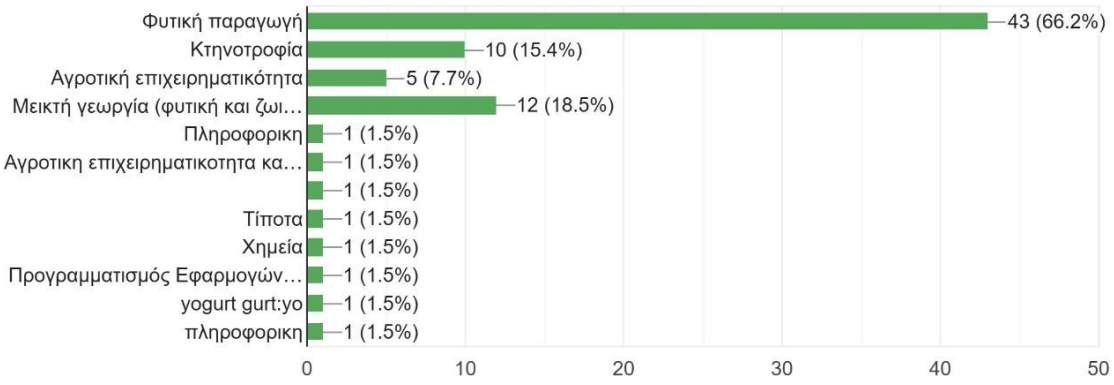
Almost 3 out of 5 respondents (38 out of 65, or 58.5%) are enrolled in vocational schools and colleges (such as IEK and EPAL), which confirms that the sample is based on practical programmes that emphasise skills. High school learners represent around a third of the sample (24 learners, 36.9%). Only 3 participants (4.6%) are at university level, indicating that, while present, higher education is clearly in the minority.



The learners' primary interest lies in crop production, as evidenced by the findings of the survey. Two-thirds of the 65 respondents (43 learners, 66.2%) expressed a strong interest in this area. A further 15.4% (10 learners) are involved in animal husbandry. A further 15.4% (10 learners) are involved in, or wish to be involved in, both plants and animals, while just 7.7% (5 learners) focus on rural entrepreneurship. 3 respondents lean towards ICT/programming for agrotechnological solutions, one towards chemistry and one states that they have no particular interest in agriculture.

2. Ποιος είναι ο κύριος τομέας σπουδών ή ενδιαφέροντός σας στη γεωργία;

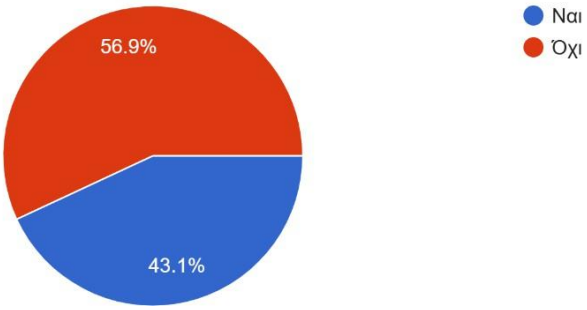
65 responses



Not everyone has had previous exposure to climate-focused lessons. Of the 65 learners, 28 (43.1%) say they have received some training on the climate crisis and its impact on agriculture, while 37 (56.9%) say they have not. Therefore, the majority are entering their studies without a formal background in the linkages between climate and agriculture, highlighting the demand and opportunity for introductory climate resilience content in vocational and secondary education curricula.

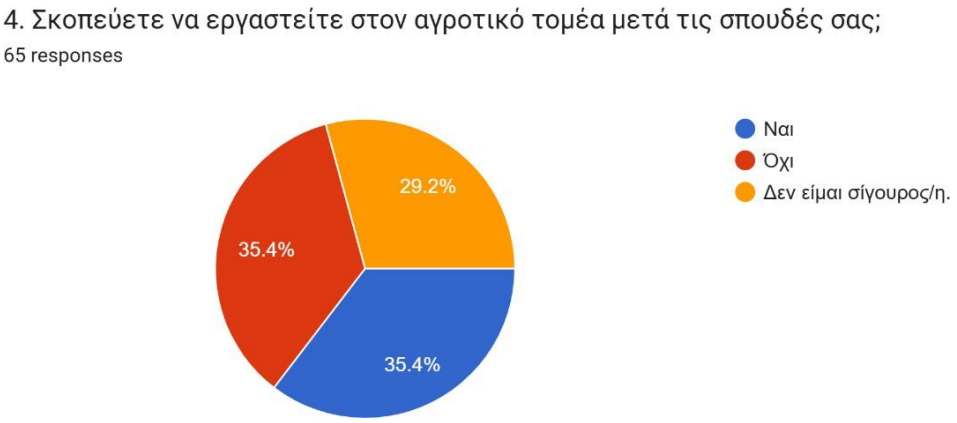
3. Έχετε λάβει στο παρελθόν εκπαίδευση σχετικά με την κλιματική κρίση και τις επιπτώσεις της στη γεωργία;

65 responses



Career intentions are anything but stable. Of the 65 learners who responded, only about a third (23 learners, or 35.4%) said 'yes' to a future in a rural area, while another 23 learners ruled this option out. The remaining 19 respondents (29.2%) are unsure which path they will take. While there is enthusiasm, just as many learners are either

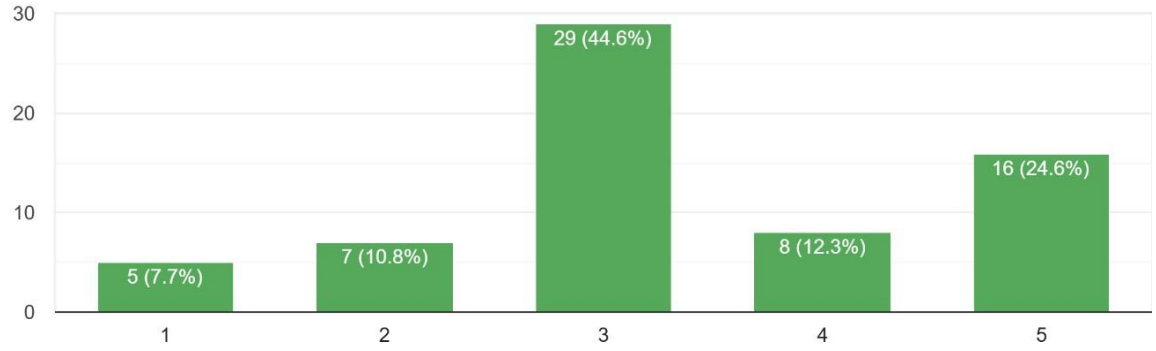
undecided or moving away from agricultural careers, suggesting that stronger incentives and clearer career paths may be needed to encourage more of them to pursue a career in agriculture.



Current situation

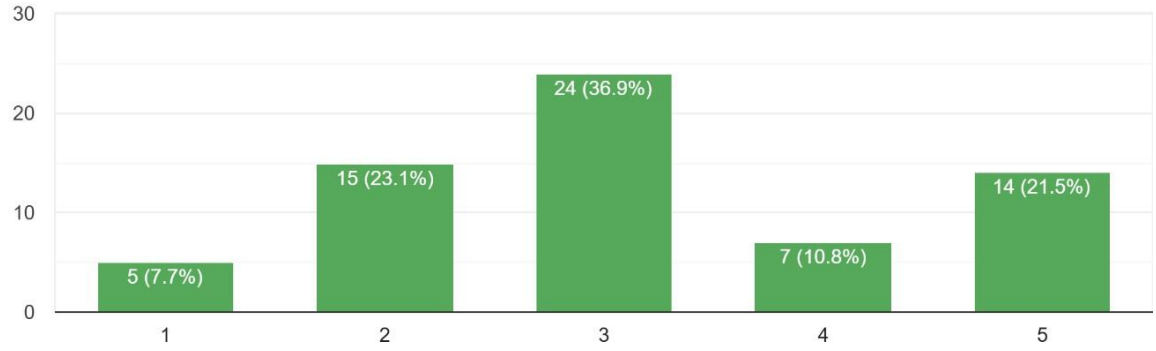
When asked how well informed they felt about emerging climate threats to agriculture, learners fell somewhere in the middle: the mean score was 3.35 and the median score was 3. Almost half of the group (29 out of 65 learners, or 44.6%) chose the neutral option of 3, indicating neither confidence nor ignorance. A further 24 learners (36.9%) expressed clear awareness by selecting 4 or 5; however, 12 respondents (18.5%) leaned towards the lower end of the scale. Although over a third already feel well informed about drought, heatwaves, and new pests, most are either undecided or poorly informed, highlighting the need to increase climate risk literacy among learners.

5. Πόσο ενημερωμένοι/ες αισθάνεστε για τις αναδυόμενες κλιματικές απειλές (π.χ. ακραία καιρικά φαινόμενα, νέοι εχθροί/ασθένειες) που ενδέχεται να επηρεάσουν τη γεωργία στο μέλλον;
65 responses

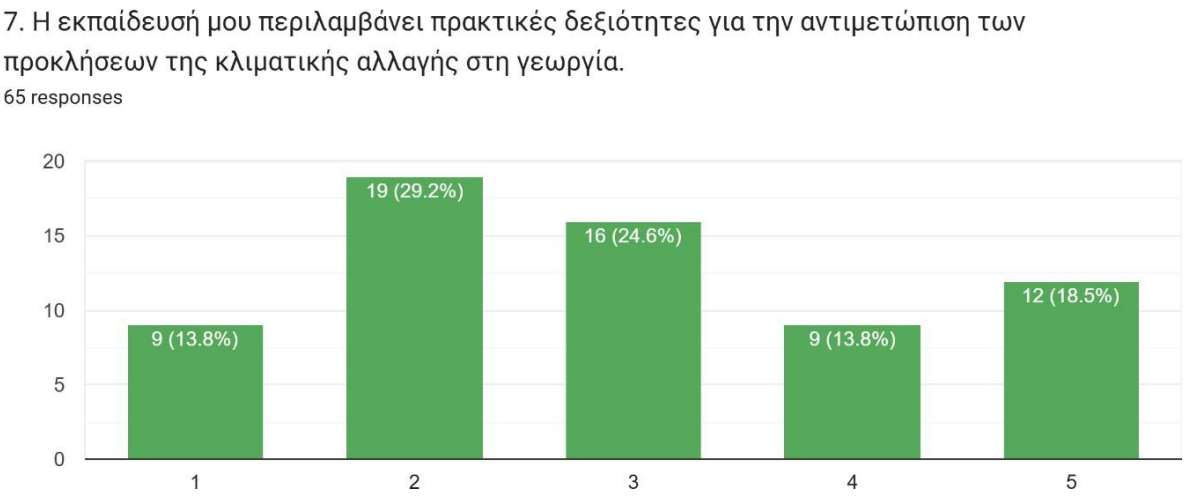


In terms of whether their current programme provides a solid understanding of the impact of climate change on agriculture, learners tend to be in the middle of the scale. With a mean score of 3.15 and a median of 3, the sample is split almost evenly between confidence and doubt. A third (21 out of 65 learners, or 32.3%) feel well equipped, giving scores of 4 or 5. Another third (24 learners, or 36.9%) are neutrally placed at 3, while the remaining third (20 learners, or 30. Eight per cent (20 learners) lean negatively (scores of 1 and 2). While a sizeable minority already perceive their education as climate-ready, most learners are either unconvinced or openly sceptical.

6. Η εκπαίδευσή μου μου παρέχει ισχυρή κατανόηση των επιπτώσεων της κλιματικής κρίσης στη γεωργία.
65 responses



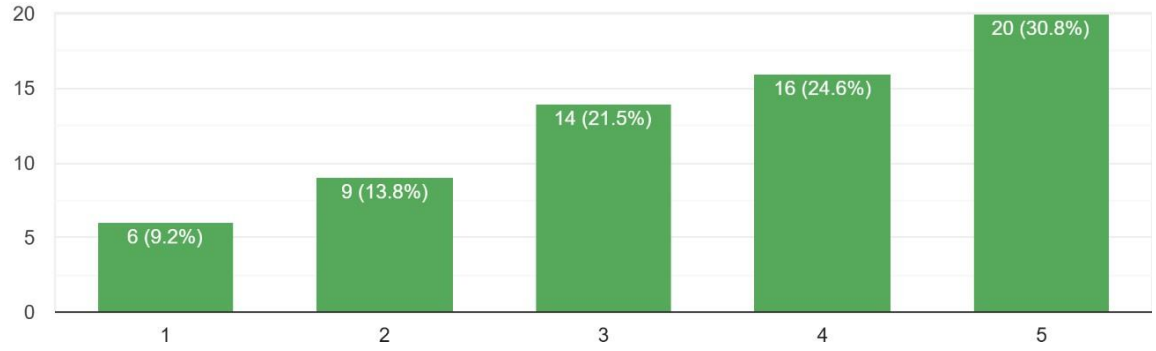
Learners are uncertain whether their programmes equip them with the practical skills needed to address climate-related challenges on agriculture. The mean score is just below neutral at 2.94, with a median of 3. Breaking down the group further, 43% (28 out of 65) disagree that they are gaining sufficient practical skills (scoring 1 or 2), while around a third (21 learners, or 32.3%) feel positively (scoring 4 or 5). The remaining 24.6% (16 learners) are undecided at "3".



When learners were asked to rate the statement 'I am interested in learning more about climate-resistant farming techniques', enthusiasm clearly outweighed indifference. Of the 65 respondents, more than half (36 learners, or 55.4%) chose the positive end of the scale (4 or 5), raising the median to 4 and the mean to 3.54. Another 14 learners (21.5%) remained neutral with a score of 3, while only 15 learners (23%) expressed little or no interest with a score of 1 or 2. This indicates a strong appetite for deeper training in climate-smart practices, which is an encouraging message.

8. Ενδιαφέρομαι να μάθω περισσότερα για τεχνικές ανθεκτικής γεωργίας απέναντι στην κλιματική αλλαγή.

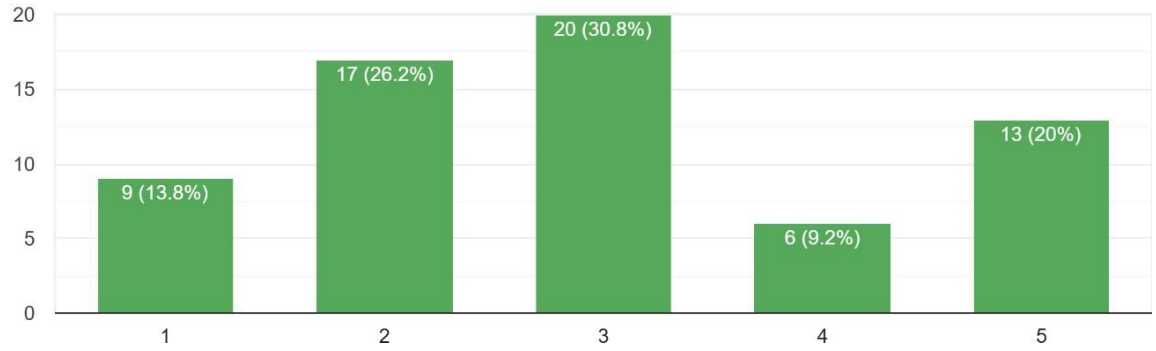
65 responses



Learners are not convinced that their programmes pay sufficient attention to sustainable and adaptive farming methods. Ratings are clustered around the mean of 2.95 on the 5-point scale, with a median of 3. Specifically, just 19 of the 65 learners (29.2%) feel there is an adequate focus, with ratings of 4 or 5. A slightly larger percentage (30.8%) were neutral, with a rating of 3, while the largest percentage (40%) were sceptical, with a rating of 1 or 2.

9. Υπάρχει επαρκής εστίαση σε βιώσιμες και προσαρμοστικές γεωργικές μεθόδους στο πλαίσιο της εκπαίδευσής μου.

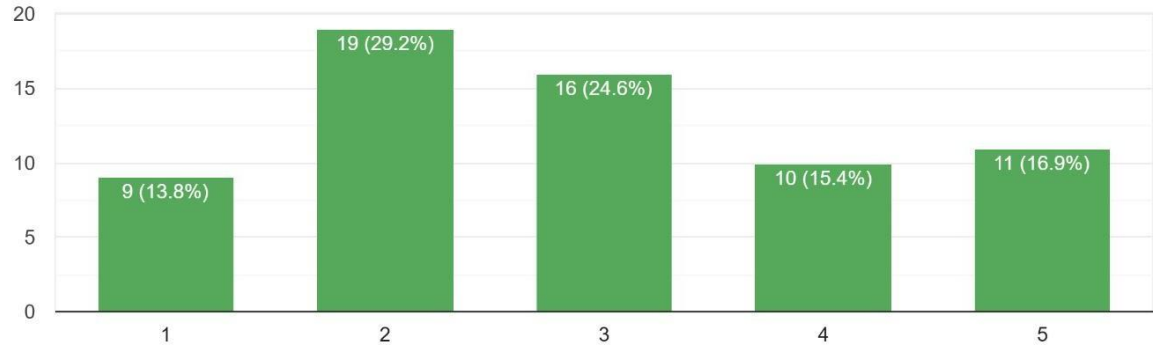
65 responses



Learners are sceptical about whether their trainers are adequately qualified to teach them about climate issues in agriculture. The mean score is 2.9 and the median is 3. A clear majority of learners (43%, or 28 learners) disagree or strongly disagree (scoring

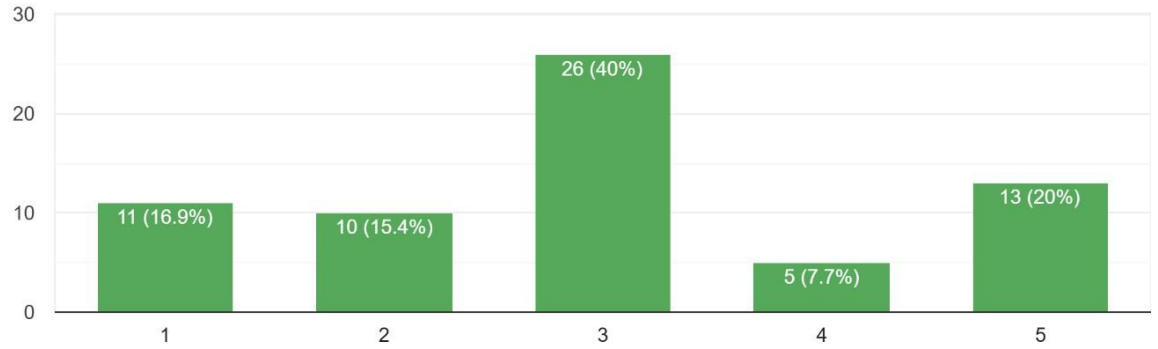
1 or 2). A smaller percentage (32.3%, or 21 learners) feel positively about their trainers' preparedness (scores of 4 or 5), while the remaining 24.6% (16 learners) are neutral (score of 3). Confidence in trainers' experience is uneven: only one in three learners is reassured, while more than four in ten see a skills gap that could weaken climate training outcomes.

10. Οι εκπαιδευτές μου είναι επαρκώς καταρτισμένοι/ες για να διδάσκουν για την κλιματική κρίση στη γεωργία.
65 responses



Opinion among learners is divided as to whether the agriculture lessons provide sufficient examples of adaptation to climate change. The group is divided into three fairly equal groups: around a third (21 out of 65, or 32.3%) disagree that the case studies are sufficient (score 1 and 2); just over a quarter (18 learners, or 27.7%) feel positively (score 4 and 5); and the majority (26 learners, or 40%) remain neutral.

11. Πιστεύω ότι η αγροτική εκπαίδευση περιλαμβάνει επαρκή παραδείγματα πραγματικής προσαρμογής στην κλιματική κρίση.
65 responses

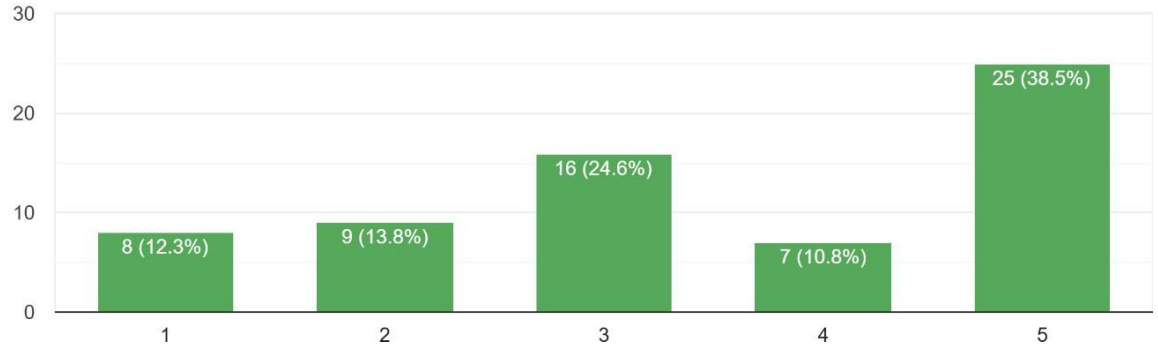


When asked whether their studies have adequately prepared them for the climate-related challenges in agriculture, learners are cautious. The average confidence score is just below the neutral level at 2.9 (median = 3). Only 30.8% feel prepared, selecting 4 or 5 on the five-point scale, while a further 27.7% remain uncertain. The largest proportion (41.6%) actively doubts their readiness.

Learners demonstrate a strong, yet not universal, desire for further training in climate resilience. The average willingness score is 3.5, with a median of 3. However, the distribution is skewed upwards, with 25 out of 65 learners (38.5%) choosing the top score of '5' and a further seven (10.8%) choosing '4'. Therefore, almost half of the learners want to enrol in additional programmes. 16 learners (24.6%) have a neutral attitude (rating 3), while 17 learners (26.1%) are hesitant or indifferent (ratings 1 and 2). Therefore, two out of five learners are highly motivated to develop their skills further; a quarter are open-minded; and a quarter react negatively.

13. Θα συμμετείχα σε επιπλέον προγράμματα κατάρτισης με επίκεντρο την ανθεκτικότητα της γεωργίας στην κλιματική αλλαγή.

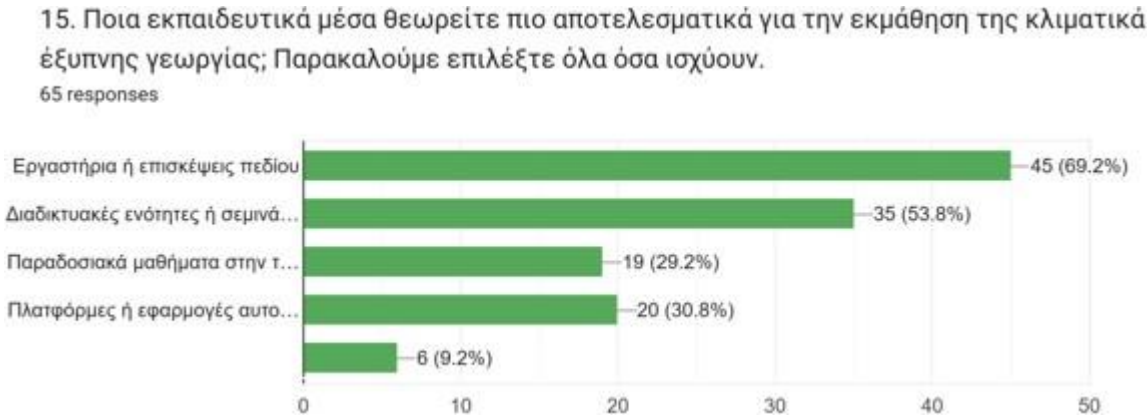
65 responses



Fields to Improve

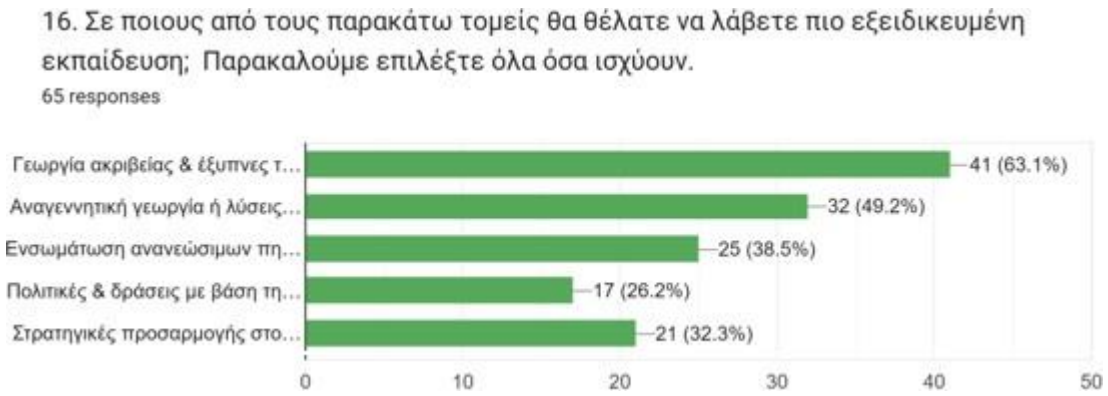
When asked to list three priorities for a climate-resilient and low-impact agricultural system, learners overwhelmingly selected one option: 'Agroforestry and biodiversity enhancement', selected by 35 of the 65 respondents, indicating a clear inclination among learners to associate tree planting and habitat health with future resilience. The next most popular option was 'carbon sequestration and emissions reduction', chosen by 22 learners. Next, two topics tied for third place: 'smart technology and digital tools' and 'water management and conservation', with 21 votes each. The middle ground—comprising livestock management, the effective use of fertilisers, farmer-centred policy and education, the integration of renewable energy sources and soil health and regeneration practices—received 18 votes each. Finally, breeding resilient crop varieties and ensuring genetic diversity received 12 votes.

When asked to select the most effective form of training for climate-smart agriculture, 45 out of 65 learners chose practical 'workshops or field visits', easily topping the table. Digital delivery also ranked highly: online modules or webinars received 35 votes, while self-paced learning platforms and applications received 20. Traditional classroom-based courses were the least popular, receiving 19 votes. While learners prefer immersive, real-world sessions, more than half also value e-learning, and around one in three welcome structured self-teaching or classroom input. This indicates a clear preference for blended, practical pedagogy.



41 out of 65 learners put technology at the top, choosing 'precision agriculture and smart technologies'. 32 learners also opted for regenerative or other nature-based

techniques, suggesting an equal demand for low-input know-how and ecosystem restoration. There was also strong demand for clean energy skills, with 25 learners wanting to learn how to integrate renewable energy on farms. Topics related to regular climate adaptation, such as drought-resistant crops, received 21 votes, while 17 learners preferred policy and action at the community level.



Challenges & Reflections

When asked which skills were missing from their courses, around a third of learners either wrote 'don't know' or left the entry blank, suggesting that many still find it difficult to articulate their needs. Among the substantive responses, important gaps stand out: Firstly, fluency in using digital and precision tools, such as sensors, drones and weather applications, was mentioned around ten times. Secondly, basic knowledge of climate impacts was requested, including how to deal with extreme weather events and how to choose drought-resistant crops. Thirdly, expertise in water and soil management was requested, including regenerative practices. Finally, exposure to renewable energy options and market-oriented or business skills was requested. It seems that engaged learners want practical experience, technological proficiency and knowledge of how to adapt. However, the significant percentage of responses saying

"I have no idea" underscores how far fundamental education in climate agriculture still has to go.

Furthermore, learners' open comments highlight a number of recurring obstacles and a significant knowledge gap. The first and most frequently mentioned obstacle is the chronic lack of practical experience: learners complain that courses are 'too theoretical', that schools lack land and equipment or internship opportunities, and that teachers themselves are often unfamiliar with climate-smart methods. This is followed by limited access to financial and technological resources, ranging from drip irrigation equipment and sensors to modern teaching materials. Several learners noted that modern tools 'are moving forward while we are lagging behind'. A third group highlights gaps in information and its complexity, as scientific material is written in 'difficult language', reliable sources are hard to find and there are few guidelines for translating data into practice. Cultural and motivational barriers also arise, with some learners being uninterested, farmers resisting change and busy schedules leaving no time for additional climate-related lessons. Finally, a series of non-answers ('I don't know') and off-topic jokes underscore how many learners still lack the basic knowledge to express their educational needs, emphasising the urgent need for clearer, more practical climate education.

While most learners either had no specific suggestions or provided one-word comments, about a third of the group (20 out of 65) offered constructive ideas that centred on four key areas for improvement. 15 learners asked for more field trips, farm workshops or practical exercises, so that theory could be based on real terrain and weather conditions. 7 respondents wanted external experts, modern digital tools, and live demonstrations of sensors, drones, and regenerative practices. 6 comments called for modules dedicated to climate-smart agriculture, written in plain language and updated as technology evolves. Finally, 4 learners suggested collaborating with local farmers or young agribusiness entrepreneurs to ensure that courses reflect market realities. While some requested better funding or discipline, the key message

was consistent: make education on climate change adaptation practical, timely and connected to the real farming ecosystem.

Finally, only about one-third of the 65 learners (21) had specific career aspirations; many simply responded 'I don't know' or made jokes unrelated to the topic. However, the remaining learners' plans fell into clear categories. 6 of the learners who responded envisaged themselves managing or working on a sustainable farm (e.g. a "green farm", their own "regeneration unit" or a "family farm with new methods"). Another 6 learners envisaged roles in research, training or advocacy (e.g. promoting regenerative practices, researching new varieties or advising peers). 2 learners were interested in technologically focused areas such as precision farming, smart machines and renewable energy pumps, as were two others who wanted to pursue further studies or practical training. The remaining responses were related to consulting, organic production, agritourism and entrepreneurship, with one response for each category. Among those who were able to formulate a goal, it is clear that farm sustainability and knowledge-based promotion ranked first, while ideas related to high technology, studies, consulting and specialised businesses also appeared.

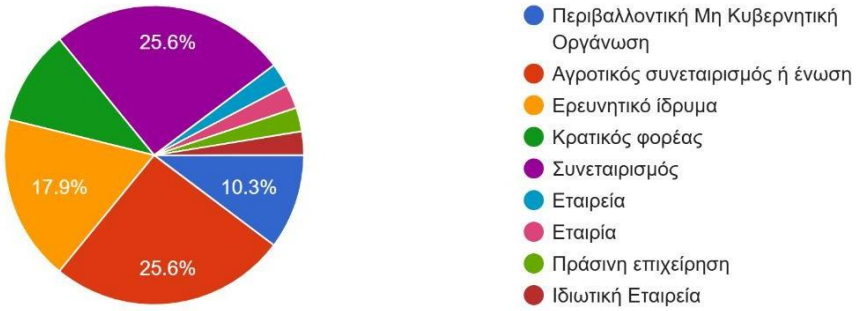
Stakeholders Questionnaires Analysis

The following summary outlines what 39 stakeholder organisations, including cooperatives, research institutions, public services, NGOs and companies, told us about their readiness for, and priorities in relation to, climate-resilient agriculture, as well as the gaps they identified. The analysis combines quantitative assessments and open-ended reflections to map these actors, showing how long they have been active for, the extent to which they are already training or innovating, and where they see the biggest barriers in terms of policy, knowledge, and funding. It also shows the most promising technological and collaborative opportunities for the next decade.

General Information

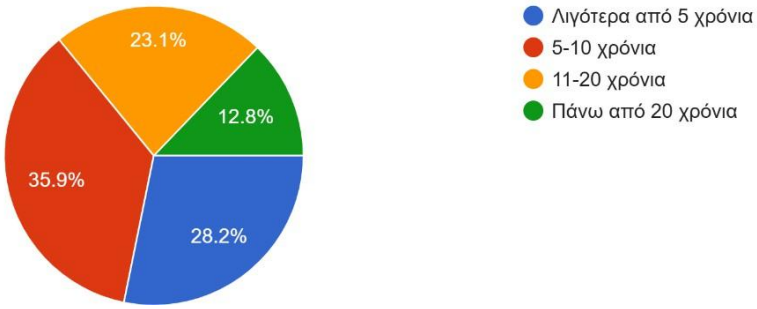
Of the 39 stakeholder organisations that responded, over half (20 responses - 51.2%) are cooperative structures. 10 of these are agricultural cooperatives/associations, while another 10 are cooperatives in general. This underlines the strong presence of producers in the sample. The next largest group is research institutions, with seven responses (18%), which gives the dataset a strong scientific voice. Government agencies, environmental NGOs and private companies each account for 4 responses (10.3%). Overall, the distribution suggests that the priorities of cooperatives are likely to dominate the findings, while the views of government agencies, NGOs and commercial entities, although present, will require careful consideration to avoid being overshadowed.

1. Ποιος είναι ο τύπος του οργανισμού σας;
39 responses

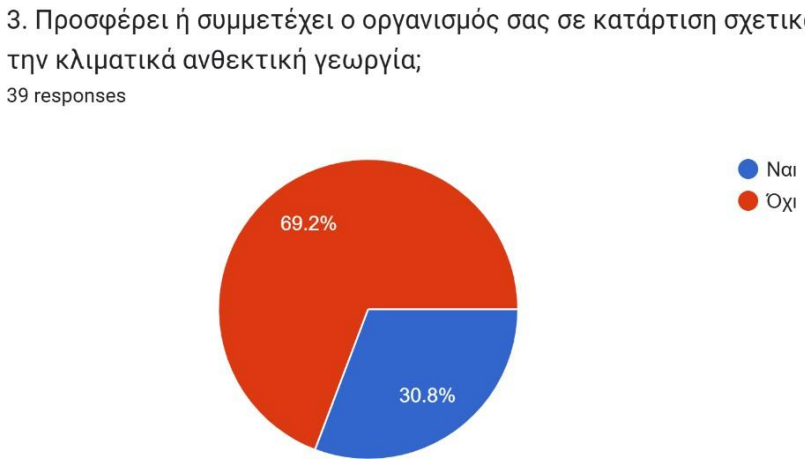


Of the 39 respondents, slightly more than one-third (14 respondents - 35.9%) have been active for between 5 and 10 years, thus constituting the largest group in terms of length of operation. Another 11 organisations (28.2%) have been operating for less than 5 years, meaning that almost two-thirds of the sample have been active for a decade or less. 9 organisations (23.1%) fall into the 11–20 year category, representing a stable group in the middle of their careers. Meanwhile, 5 organisations (12.8%) with a long history report more than 20 years of activity. Overall, the profile suggests a dynamic sector dominated by newer or developing organisations, but still supported by a significant proportion of experienced actors.

2. Πόσα χρόνια δραστηριοποιείται ο οργανισμός σας στον αγροτικό ή περιβαλλοντικό τομέα;
39 responses



Training in climate-resilient agriculture is still uncommon: only 12 of the 39 organisations (30.8%) currently offer or participate in such training, while the majority (69.2%) do not.

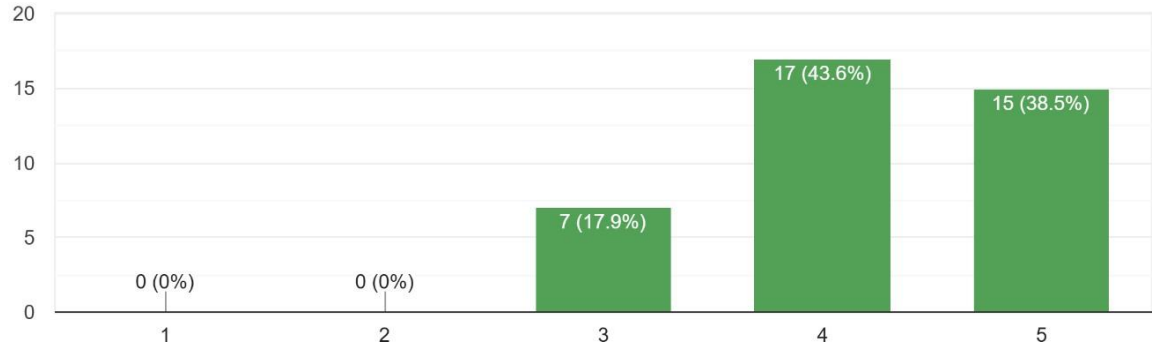


Current situation

When asked to evaluate the statement that the climate crisis reduces farm productivity in their region, respondents gave a clear response, with an average rating of 4.2 (out of 5) and a median rating of 4 ("Agree"). An impressive 82% of organisations (32 out of 39) chose 4 or 5, indicating a strong consensus that these losses are not just theoretical, but are actually occurring. Seven respondents (17.9%) remained neutral with a rating of 3, and none expressed complete disagreement. The distribution of 17 "4" ratings and 15 "5" ratings indicates that concern is widespread among all stakeholders.

4. Η κλιματική κρίση έχει επηρεάσει σημαντικά την αγροτική παραγωγικότητα στις περιοχές όπου δραστηριοποιούμαστε.

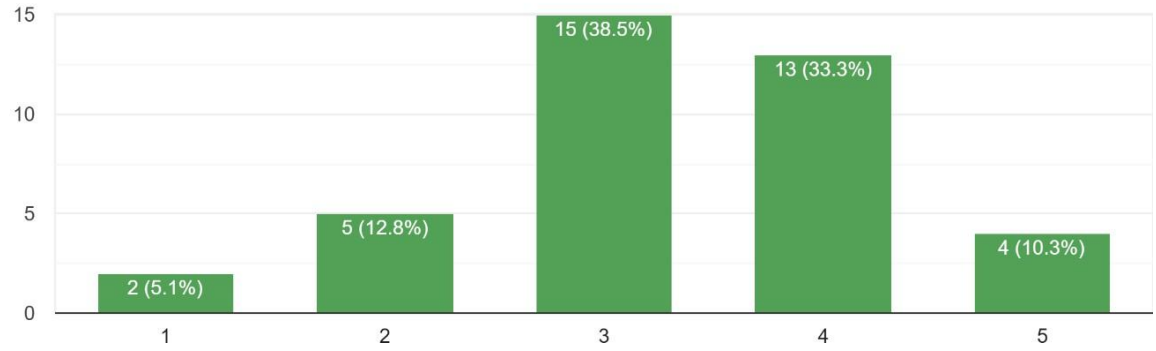
39 responses



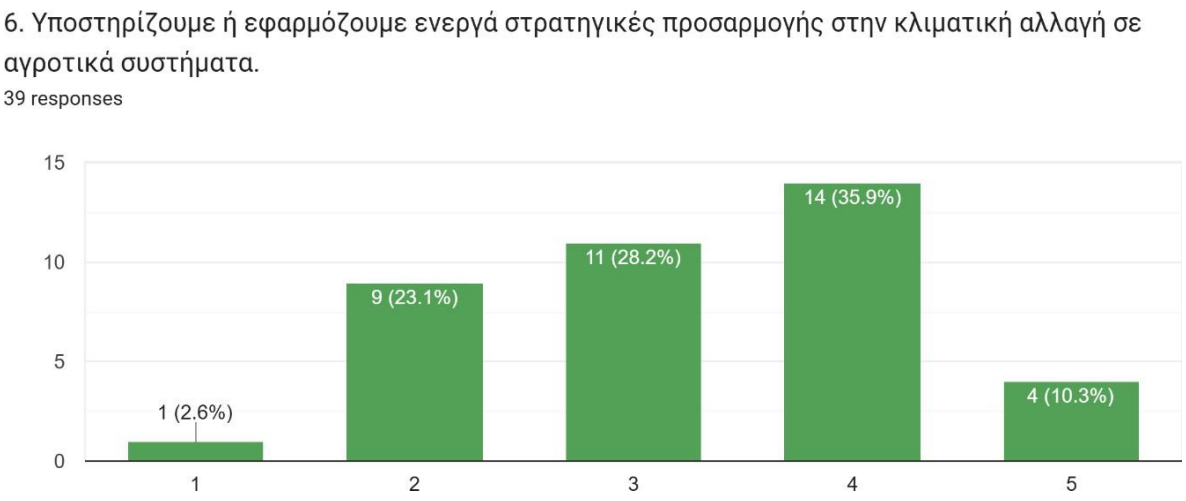
When asked whether their organisation feels well informed about the climate crisis and its impact on agriculture, responses cluster around the middle of the scale: the mean score is approximately 3.3 and the median is 3, indicating moderate confidence overall. Fewer than half of the stakeholders (17 out of 39, or 43.6%) express clear confidence by selecting 4 or 5. A significant proportion (38.5%, or 15 respondents) remain neutral by selecting 3, while a smaller but notable minority (17.9%, or 7 organisations) actively question their level of knowledge by selecting 1 or 2. While the sample leans slightly towards feeling informed, the data reveals considerable scope for capacity building before the vast majority can claim to have strong climate literacy.

5. Ο οργανισμός μας είναι καλά ενημερωμένος για την κλιματική κρίση και τις επιπτώσεις της στη γεωργία.

39 responses



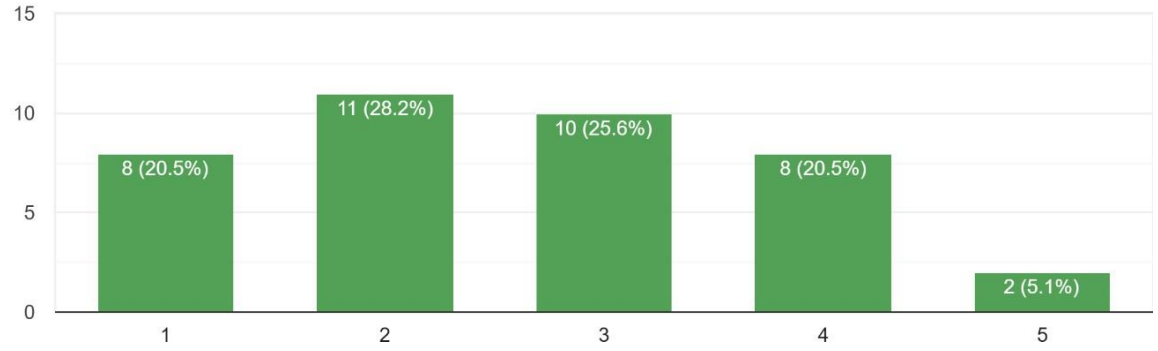
When asked whether their organisation supports or actively implements climate change adaptation strategies in agricultural systems, the responses were mixed but slightly positive. 18 of the 39 stakeholders (46.2%) selected 'Agree' or 'Strongly Agree' (scores of 4 and 5), indicating some active engagement. However, 11 organisations (28.2%) were neutral (score 3), and 10 respondents (25.7%) disagreed (scores 1 and 2). The overall average score is around 3.28, with a median score of 3. This suggests that commitment to specific adaptation measures is not universal, with almost half of the sample either remaining hesitant or not yet active in this area.



When asked whether they believe they already have sufficient resources and training materials to strengthen the climate resilience of rural communities, respondents were clearly sceptical. Almost half of the respondents (19 out of 39, or 48.7%) selected 1 or 2 on the 5-point scale, indicating outright disagreement. Another 10 stakeholders (25.6%) selected the neutral midpoint (3), while only 10 organisations (25.6%) felt positively (scores 4 and 5). The mean score is approximately 2.6, with a median of 3, confirming that confidence in existing support tools is generally moderate and that a notable resource gap remains.

7. Διαθέτουμε ή προσφέρουμε επαρκείς πόρους και εκπαιδευτικό υλικό για την ενίσχυση της ανθεκτικότητας των αγροτικών κοινοτήτων.

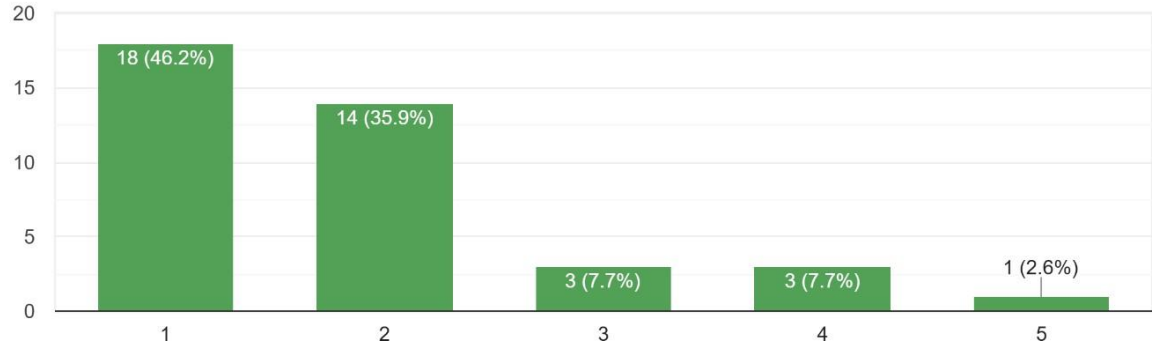
39 responses



When asked whether current government policies and support mechanisms are sufficient to help farmers cope with climate pressures, stakeholders answered negatively. The average score was just 1.9 out of 5, with a median of 2 ('Disagree'). 82.1% of organisations (32 out of 39) chose 1 or 2, indicating clear dissatisfaction. In contrast, only 4 respondents (10.3%) expressed confidence by selecting 4 or 5. Only 3 organisations (7.7%) adopted a neutral stance by selecting 3. In summary, most stakeholders perceive a significant gap in policies and support that needs to be filled before farmers can respond effectively to the climate challenge.

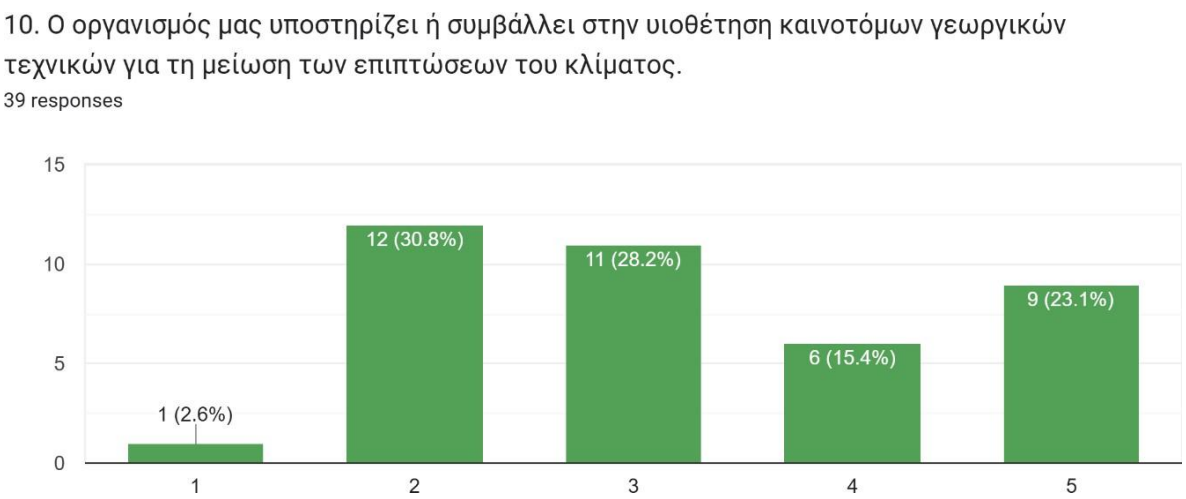
8. Οι τρέχουσες πολιτικές και υποστηρικτικοί μηχανισμοί της κυβέρνησης είναι επαρκείς για να βοηθήσουν τους αγρότες να αντιμετωπίσουν τις κλιματικές προκλήσεις.

39 responses



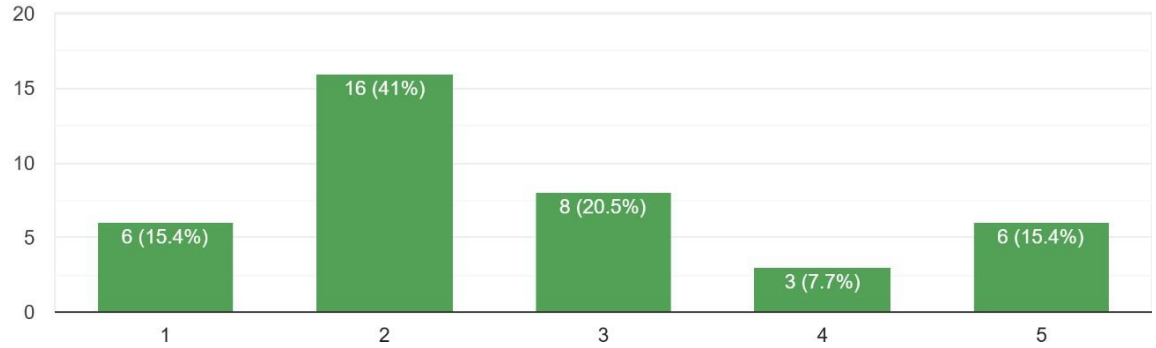
When asked if they had already observed an increase in stress and health problems in crops or livestock due to climate instability, respondents gave strikingly positive answers. The average score was approximately 4.2 out of 5, with a median of 4 ('Agree'). 84.6% of organisations (33 out of 39) selected 4 or 5, indicating that these impacts are widely acknowledged as genuine and escalating. Only five stakeholders (12.8%) selected the neutral midpoint, and only one respondent (2.6%) expressed mild disagreement; no one selected the most negative option. In short, the vast majority already view climate-related pressure on agroecosystems as an immediate reality rather than a distant risk.

When asked how actively their organisation advocates innovative farming methods to mitigate climate impacts, stakeholders gave quite mixed responses. The average score was around 3.3 out of 5, with a median of 3 ('neutral'). Around two out of five respondents (15 out of 39, or 38.5%) expressed clear support by selecting 4 or 5, while a similar proportion (13 organisations, or 33.4%) leaned towards 1 or 2. The remaining 28% (11 respondents) were neutral. In summary, while enthusiasm for promoting climate-smart innovation is evident among a significant minority, just as many stakeholders remain unconvinced or inactive, revealing ample opportunity to expand engagement and capacity.



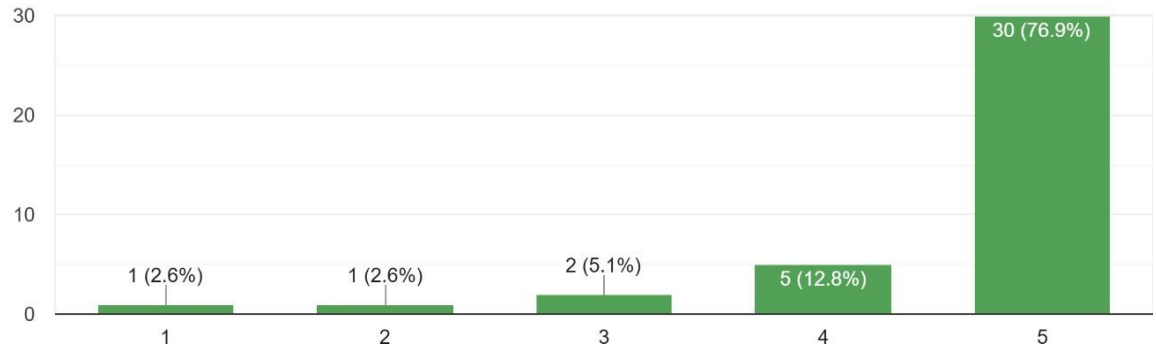
When stakeholders assessed the extent to which their organisation was already implementing climate adaptation technology, such as remote sensing, monitoring applications and early warning systems, they tended to be sceptical. More than half of the sample (22 out of 39 organisations, or 56.4%) disagreed (scoring 1 & 2), while another eight organisations (20.5%) remained neutral (scoring 3). Only nine respondents (23.1%) expressed clear support (scoring 4 & 5). The mean score was around 2.7 and the median was 2, confirming that digital tools remain more aspirational than embedded in day-to-day adaptation work for most actors.

11. Προωθούμε ή χρησιμοποιούμε ψηφιακά εργαλεία (π.χ. τηλεπισκόπηση, εφαρμογές παρακολούθησης, συστήματα έγκαιρης προειδοποίησης) για την προσαρμογή στο κλίμα.
39 responses



When stakeholders considered the importance of close cooperation between farmers, researchers, policymakers and civil society organisations to address climate change in agriculture, the verdict was almost unanimous. The average score was 4.6 out of 5, with 35 out of 39 organisations (89.7%) scoring 4 or 5, and 30 of these chose 5. Only 2 respondents remained neutral, and only 2 expressed some degree of disagreement. In short, the stakeholder community is united in its view that cross-sectoral cooperation is essential for effective climate action in agriculture.

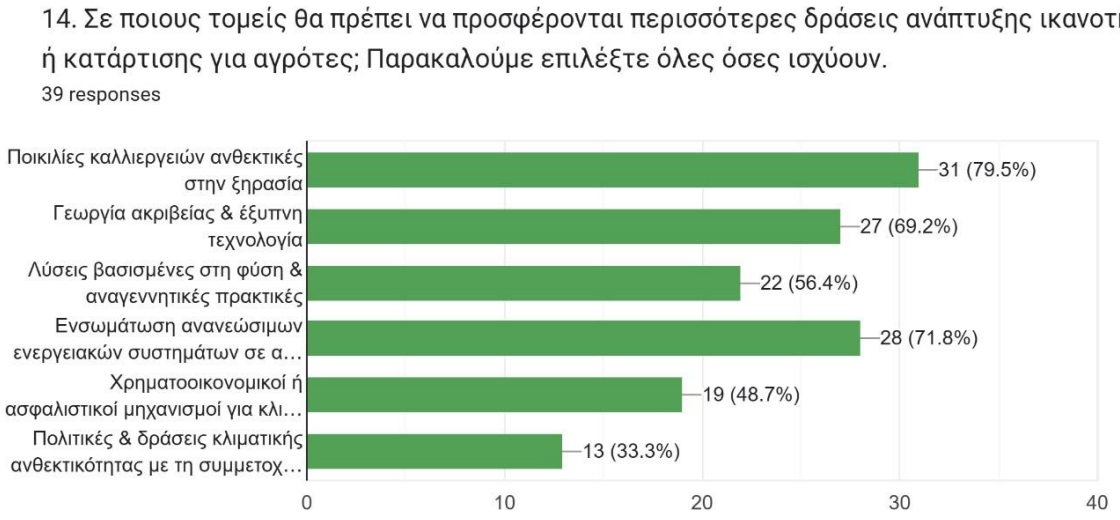
12. Η συνεργασία μεταξύ αγροτών, ερευνητών, υπεύθυνων χάραξης πολιτικής και της κοινωνίας των πολιτών είναι ουσιαστική για την αντιμετώπιση της κλιματικής αλλαγής στη γεωργία.
39 responses



Fields to Improve

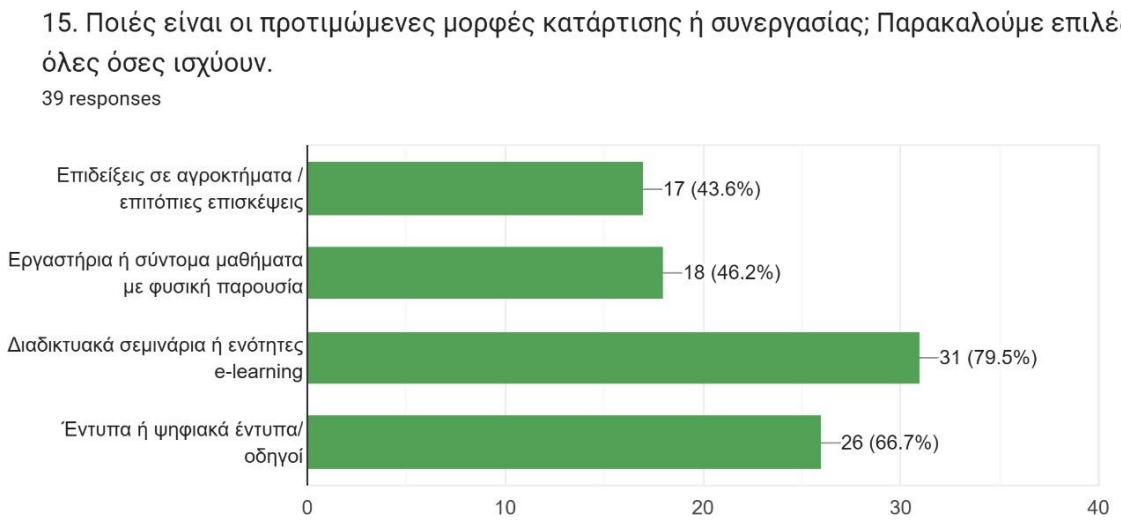
When asked which areas needed the most attention to promote climate-resilient and environmentally sustainable agriculture, respondents identified three priorities. The first, 'breeding resilient crop varieties and ensuring genetic diversity', was chosen by 17 out of 39 organisations, followed closely by 'carbon capture and emissions reduction' (16 options). Third was "climate-smart livestock management" with 14 votes. A second category, chosen by around a third of stakeholders, included efficient fertiliser and nutrient use, farmer-centred policies, education, and smart technology and digital tools (13 votes). Slightly fewer organisations emphasised soil health and regenerative practices, agroforestry and biodiversity, and the integration of renewable energy and water management/conservation (10 and 12 votes respectively). Overall, the results suggest a balanced, carbon-focused agenda, with solutions relating to livestock, nutrient management and policy/technology not far behind. Meanwhile, biodiversity, energy and water issues continue to attract a steady, though less dominant, share of attention.

When asked where farmers most need capacity building, stakeholders agreed on a set of skills focusing heavily on technology and climate risk. Around three-quarters of organisations (31 out of 39 responses) identified the development of drought-resistant crop varieties as the most important priority. Two closely related topics were selected as the second priority by just over two-thirds of respondents: precision agriculture and smart technologies, and integrating renewable energy systems into farms (27 and 28 responses, respectively). Nature-based/regenerative practices were highlighted by just over half of the organisations (22 responses), while financial or insurance instruments that offset climate risk were emphasised by just under half (19). In last place, accounting for around one-third of votes, were community-based policy and resilience initiatives (13 selections). In short, the list of training preferences is headed by hard engineering solutions (drought-resistant genetics, high-tech management and renewable energy sources), supported by regenerative know-how and risk financing tools.



When asked about their preferred forms of training and collaboration, respondents demonstrated a clear preference for digital solutions. Almost four out of five organisations (31 out of 39) opted for webinars or e-learning modules, while two-thirds (26 votes) still valued printed or digital guides for reference. Traditional face-to-face

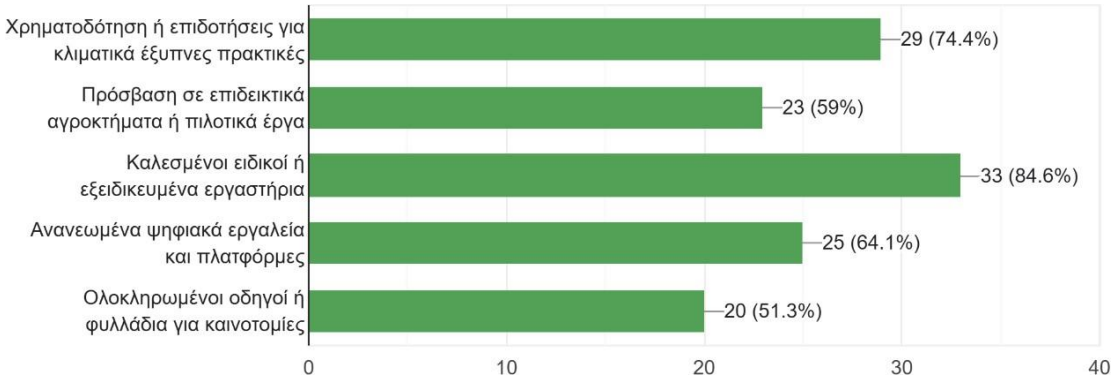
options were less popular: face-to-face workshops or short courses received 18 votes, while farm demonstrations/field visits received 17 votes. While stakeholders want blended learning, the greatest desire is for staggered online delivery supported by concise written material. Practical formats should act as a complementary rather than primary venue for skills development.



When asked to select the support resources that would best enhance farmers' resilience to climate change, stakeholders chose invited experts and specialised workshops as the top option, with 33 out of 39 organisations selecting this option. Next came funding or subsidies for climate-smart practices (29 votes), which highlights the fact that new knowledge requires a corresponding cash flow. Popular options in the middle of the table were updated digital tools and platforms (25 votes) and access to demonstration farms or pilot projects (23 votes), indicating a demand for virtual and hands-on learning environments. Finally, 20 organisations requested comprehensive guides or brochures, indicating a desire for printed materials. Thus, stakeholders want expert-led, well-funded support enhanced by modern technology, real-world testbeds, and clear written guidance.

16. Ποιοι υποστηρικτικοί πόροι θα ενίσχυαν την ανθεκτικότητα των γεωργικών συστημάτων στο κλίμα; Παρακαλούμε επιλέξτε όλες όσες ισχύουν.

39 responses



Challenges & Reflections

When stakeholders were asked to describe the main barriers to helping farmers adapt, a cluster of interrelated issues emerged. The most significant of these was the knowledge gap. Organisations repeatedly cited insufficient training, poor access to up-to-date information, and the low digital skills of producers (who are often older) as factors that slow down the adoption of climate-smart practices. Financial barriers were the next most frequently cited issue, ranging from the high cost of new technologies to limited or complex financing instruments. A third technology-related issue was the digital divide itself, characterised by scarce local data, weak broadband, few precision farming tools and a lack of qualified advisors. Respondents also pointed to institutional barriers such as bureaucracy and inconsistent or changing policies, as well as a lack of coordination between research, government and farmers. Several respondents also highlighted natural constraints, such as drought-related water scarcity, soil degradation and increasingly extreme weather events. Finally, social factors and resistance to change, as well as a lack of convincing success stories, complete the picture of farmers facing a simultaneous lack of money, expertise, supportive policies and climate-resilient resources.

In order to overcome the obstacles they described, stakeholders are calling for a multidimensional support package based on four pillars. First comes funding. Almost every comment mentions grants, subsidies or low-threshold financing instruments, particularly for precision technology, water-saving infrastructure and the transition costs faced by smallholders. Secondly comes knowledge and skills. Respondents want modern, practical training programmes and lifelong learning programmes, as well as a stronger body of climate-savvy advisors. They want these to be delivered through local hubs, digital platforms and field days for farmer-researchers. Thirdly, they want a supportive policy environment. Support is given to streamlined, coherent rules (with no shifting of targets), reform of climate risk insurance and national strategies that incorporate local voices while rewarding sustainable practices. Fourthly, infrastructure for collaboration is needed. This includes networks connecting farmers, technology companies, academics and citizen groups, as well as demonstration farms, innovation incubators and open climate data observatories. Therefore, stakeholders believe that success depends on combined economic, educational, regulatory and networking support that is flexible enough to accommodate regional realities, yet coherent enough to lead to smart, large-scale climate change.

When asked if they had supported or observed any successes in adapting to climate change, the sample was almost evenly divided: around half said 'none so far', while the rest reported various successes. The most obvious of these positive elements is precision agriculture, which includes soil moisture sensors, remote insect traps, drip lines with telemetry, weather forecasting applications and multifactorial climate models. These contribute to water conservation, reduced fuel consumption and increased yields. Several organisations combined these tools with low-intensity or nature-based measures, such as using drought-resistant varieties, practising agroforestry, composting agricultural waste, using soil revitalisation rotations and building micro-reservoirs for collecting rainwater. A smaller group highlighted energy

conversions, such as photovoltaic arrays or waste-to-energy facilities, while another group emphasised the importance of traditional local knowledge in situations where modern data is scarce. Common success factors include practical demonstrations in the field, close relationships with regional advisors and access to small-scale financing. The main caveats relate to farmers' limited connectivity, which hinders remote training, and the need for further funding and capacity building to enable these pilot programmes to be scaled up beyond the early adopters.