GREEN SQUARE

# CONSULTATION WITH YOUTH

The analysis was carried out within the framework of the international project «Green Square», co-financed by the European Union, Erasmus+ program.

We are currently facing numerous challenges related to environmental protection and sustainable development. Ecosystem degradation, climate change, biodiversity loss and pollution pose a real threat to our planet and future generations. Therefore, it is important to strengthen the environmental awareness of young people and inspire them to take action to protect the environment.

For young people, there is often a lack of full awareness of environmental problems and an understanding of their connections to our daily lives. There is also a tendency to postpone environmental concerns for the future, not realizing the urgency and scale of the problem. In addition, young people often feel helpless and insecure in the face of the enormous challenges posed by environmental protection.

Therefore, it is essential to use appropriate tools and methods that will help strengthen their environmental awareness and encourage them to actively engage in pro-environmental activities. In this context, gamification, i.e. the use of game elements for education and motivation, can be an effective strategy.

Gamification is a technique that uses game elements to engage and motivate participants to achieve specific goals. In the case of ecology, gamification can be an effective tool to raise awareness among young people and inspire them to take pro-environmental actions.

By introducing elements of competition, rewards, achievement and cooperation, gamification can transform the learning process and environmental activities into an attractive and engaging adventure. Gamification offers many benefits for the environmental education of young people. First of all, through the use of game elements such as competition and rewards, greater interest and involvement of students can be aroused.

Gamification allows participants to experience learning through hands-on activities and interactions, making the educational process more engaging and attractive. In addition, gamification can be an effective tool to motivate pro-environmental activities. By rewarding participants for environmental achievements, such as saving energy, segregating waste or planting trees, positive habits can be fostered and long-term commitment to the environment can be encouraged. Gamification can also foster cooperation and teamwork, encouraging young people to act together and solve environmental challenges. Introducing gamification into environmental education can have long-lasting effects in shaping pro-environmental attitudes in young people.

By combining learning with fun and motivation to achieve goals, gamification can help create positive habits and values related to environmental protection. Participation in environmental games can also develop social skills such as cooperation, communication and problem-solving, which are important for social sustainability. In the context of the growing demand for online and virtual skills, gamification is particularly suitable for young people who are familiar with technology and respond positively to interactive learning methods. Gamification can be implemented in various forms, from mobile apps to virtual simulations, allowing tools to be tailored to the preferences and needs of young participants.

Gamification
can be
an effective tool
to motivate
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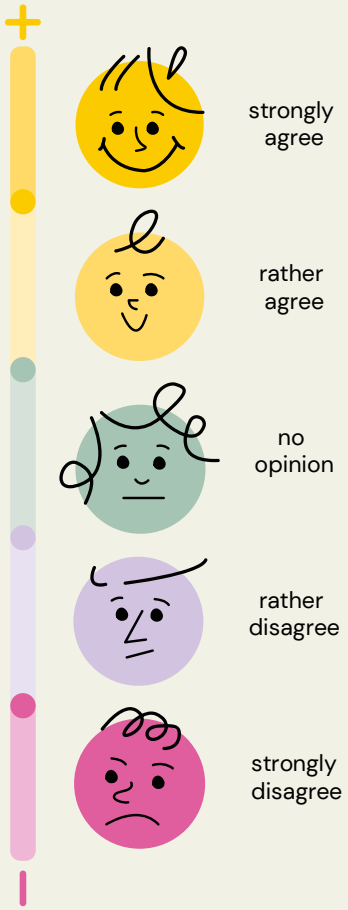
activities.

# ABOUT THE SURVEY

The Green Square Project's youth consultation was aimed at exploring and analyzing the relevance and interest of the training materials in our long-term «Green Square» project. Together with the project partners, we decided that it was only right to conduct a proper needs analysis «at the source», i.e. our future project target groups. The main topics of said consultation were the content and methodology of future training materials/training manual, in the field of ecology/pro-environmental attitudes and the possibility of combining them with entrepreneurial activities. In addition, we wanted to learn about and analyze the relevance of the assumed involvement and experience within the framework of creating a serious game, based on the development of ecological competence and pro-green attitudes among young people. Consultations with young people took place in May-September 2022, among partner organizations (organizations from Poland, Spain and Hungary). The method of measurement was based on a questionnaire-questionnaire tool, containing both open-ended and closed-ended questions (based on a five-point Likert scale, with answers divided into: 1- strongly disagree, 2- rather disagree, 3- have no opinion, 4- rather agree, 5- strongly agree).




The basis for the creation of the cafeteria of questions was based on previous research on environmental awareness, entrepreneurship among young people and the possibility of using modern forms of inclusion and engagement of the above through gamification elements. In addition, we based our analysis on a publication on «The Future of Work in Europe,» in providing knowledge and skills online, it is estimated that there will be an increase of 33%, creating a total of almost six million additional new jobs in Europe. According to the World Economic Forum, of the young people currently learning, as many as 65% will be working in occupations that do not yet exist, but are mostly based on new technologies (World Economic Forum, 2019). By 2030, demand for online/virtual skills and those based on actively engaging respondents through interactive gamification methods will increase by 39% (McKinsey Global Institute, 2020). Additionally, according to the report «The 7 Drivers Shaping The Future of Work» (Talent alpha, 2019), 88% of the potential from the use of modern technology is still untapped. The need to train youth and youth workers in ecology and pro-environmental activities (and to present them in an interesting, engaging virtual form) is becoming essential, given the promotion of innovation, inclusion and entrepreneurship as a means of enhancing employability and competitiveness (European Commission, 2015). Moreover, as Michigan State University has stated, the fields of ecology and entrepreneurship should not be viewed independently of each other, as they are closely intertwined; they often lead to the generation of ideas that are then transformed into extraordinary business opportunities (Radloff, 2018).

The survey was conducted in a virtual/online format. As a whole, the survey included 99 participants (33 young people from Hungary, 29 respondents from Spain and 37 from Poland), with an age range of 15-34 years, including 51 women, 40 men and 8 non-heteronormative people. 58 respondents resided in urban areas, 41 in rural areas. The questionnaire part of the survey did not include respondent identification items, it only allowed for quantitative verification of survey participants from the organization. The metric data were separated from the questionnaire responses at the data analysis stage.

**99**
participants of the survey

**37** from Poland

**33** from Hungary

**29** from Spain

**58%** resided in urban areas

**41%** resided in rural areas

**51** women

**40** men

**8** non-heteronormative

# SUMMARY OF CONSULTATIONS

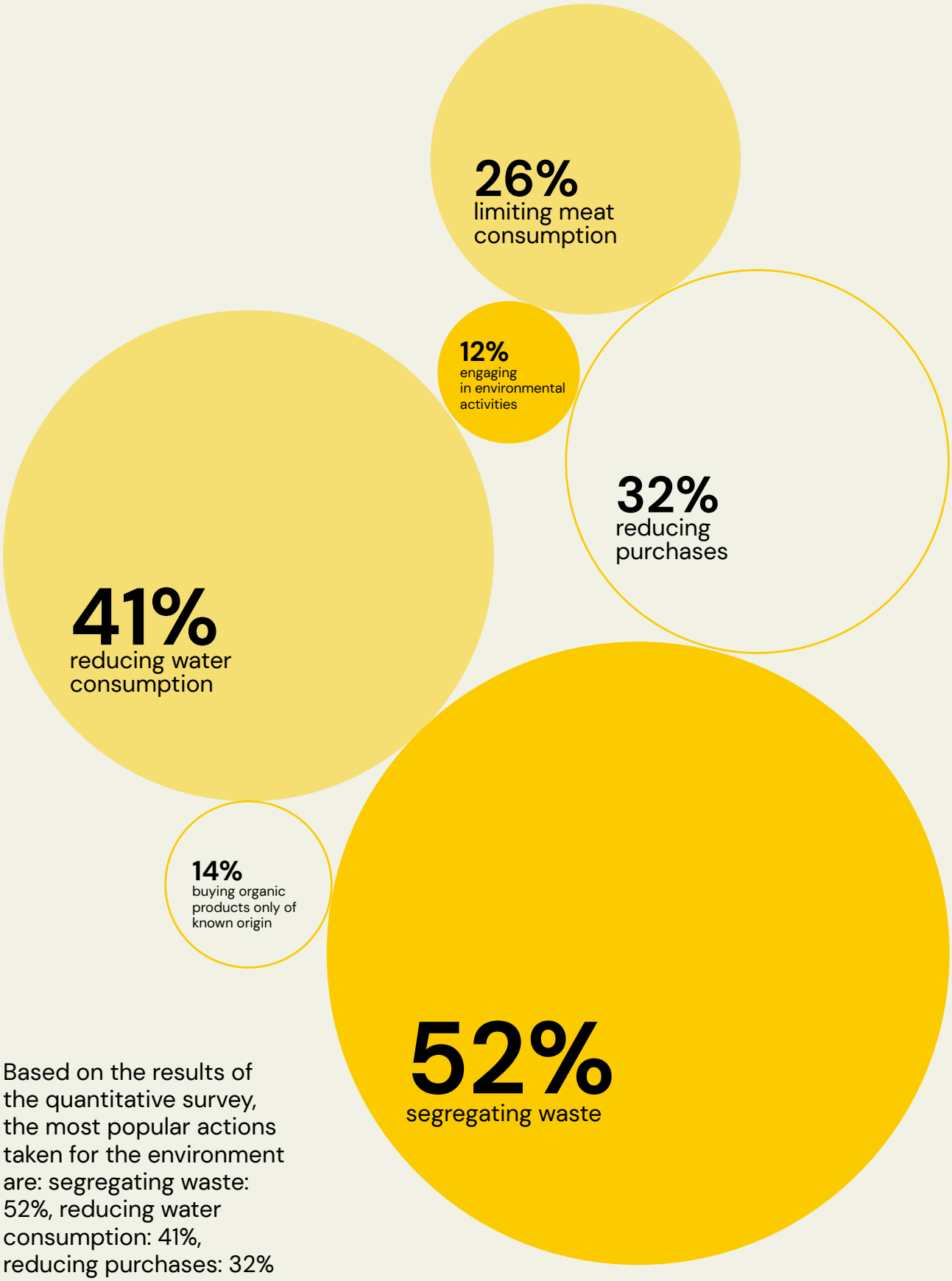
## 01.

## Pro-environmental activities

An analysis of the consultation found that young people already had some knowledge of environmental issues, such as recycling, saving energy, reducing water consumption and keeping their surroundings clean. However, they often lacked a fuller understanding of the scale and seriousness of the problems affecting our planet. They pointed out the need to expand their knowledge of the effects of climate change, the loss of biodiversity, and the impact of pollution on people's health and quality of life.

The young people also expressed a desire to gain concrete knowledge about how they can contribute to environmental protection on a daily basis. They were interested in practical tips for changing lifestyles, choosing greener products, reducing energy and water consumption, and promoting sustainable practices in their communities.

In addition, young people expressed the need to access up-to-date information on innovative environmental solutions and technologies. They were interested in developing green entrepreneurship competencies and learning about examples of successful pro-environmental initiatives and projects. Among young people, there is a strong desire to take action on ecology and «pro-green» practices. During the consultations, they reported many initiatives, habits and ideas that can contribute to the protection of our planet.




Based on the results of the quantitative survey, the most popular actions taken for the environment are: segregating waste: 52%, reducing water consumption: 41%, reducing purchases: 32%

In contrast, less popular actions include: limiting meat consumption: 26%, buying organic products only of known origin: 14%, engaging in environmental activities: 12%.

It is noteworthy that young people show more commitment to practices that are directly related to daily life, such as waste segregation and water conservation.

There is potential for greater mobilization and engagement in environmental activities and consumer choices that support sustainability.

# 02.

## Knowledge regarding environmental protection

- Many responses focused on specific actions such as recycling, reducing pollution, investing in renewable energy sources, protecting animal and plant species, reducing meat consumption, reducing plastic use, and improving carbon footprint efficiency.
- Participants emphasized the idea of taking care of the planet and being aware of its limited resources, which aligns with the concept of sustainability.
- Education and increased awareness were highlighted as important factors for better environmental protection.
- Legal and regulatory issues related to environmental protection were mentioned.
- Overall, environmental protection was seen as a complex issue that requires action at individual, social, and political levels.
- Responses indicated that environmental protection involves taking care of the planet's natural resources and reducing negative human impact through changes in consumption habits and social practices.
- Environmental campaigns and waste minimization practices were mentioned as part of environmental protection.
- Preserving natural resources and caring for the land, seas, and species were seen as integral to environmental protection.
- Environmental protection was generally understood as a set of measures aimed at protecting the environment from harm and negative impacts, such as pollution and harm to wildlife.
- Preserving and restoring environmental balance, sustainable development, and conscious resource use were mentioned as important aspects.
- Some respondents had a limited understanding or were unable to provide a clear definition of environmental protection.

All responders recognized the importance of environmental protection but had varying levels of understanding and emphasis on different aspects.

The responses highlighted the need for individual actions, social awareness, political involvement, education, and sustainable practices to achieve effective environmental protection.

# 03.

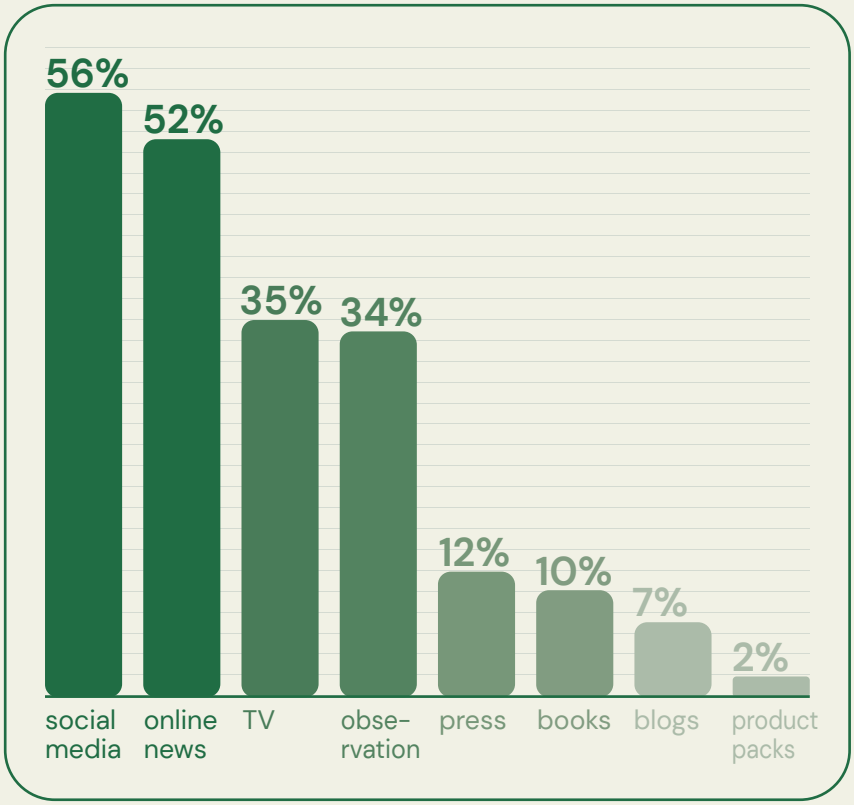
## Knowledge regarding environmental protection

sources of information acquisition by young people

Analyzing the results of the survey on young people's sources of information on ecology provides a better understanding of their preferences and habits regarding obtaining knowledge on this topic. The survey shows that young people use a variety of sources of information on ecology.

The most frequently indicated channels are social media, with a score of 56%. This is understandable, as young people actively participate in social media platforms, where they can easily find information, articles and content related to ecology. Online news portals are also popular, with a score of 52%. Young people are taking advantage of the wide availability of online information to gain knowledge about climate change and other environmental issues.  Television remains an important source of information, garnering 35% of the vote. Despite the rise in popularity of social media and online news portals, the traditional medium of television continues to capture the attention of young people and provide them with information on ecology. It should also be noted that young people value their own observations as a source of knowledge about ecology, as indicated by 34% of respondents.

Seeing environmental changes on their own can be inspiring and lead to greater environmental awareness. On the other hand, less popular methods of obtaining information are the press (12%), books (10%), blogs/wide blogs (7%) and product packaging (2%). Although they have lower percentages, they still represent a certain channel of knowledge about climate change for young people.

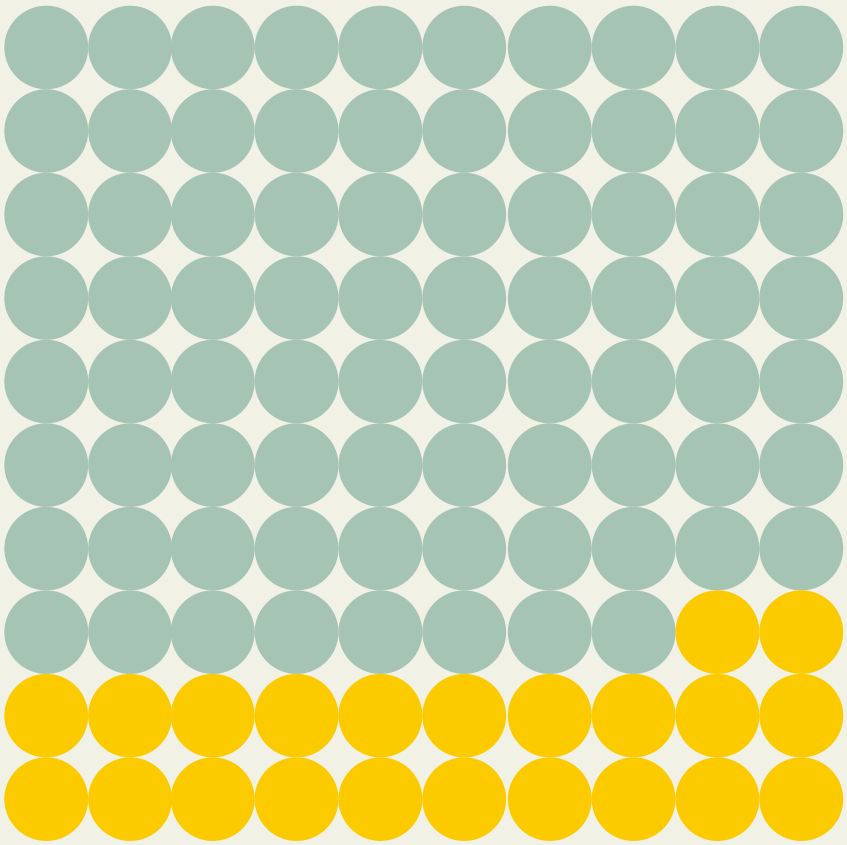



Young people use a variety of sources of information on environmentalism, with social media, online news portals, television and their own observations being the most frequently indicated channels

However, it is worth remembering that any source of information can contribute to building environmental awareness and spreading environmental knowledge among the younger generation.

# 04.

## Knowledge regarding interior ecology



78%

participants were not familiar with the concept of eco-houses

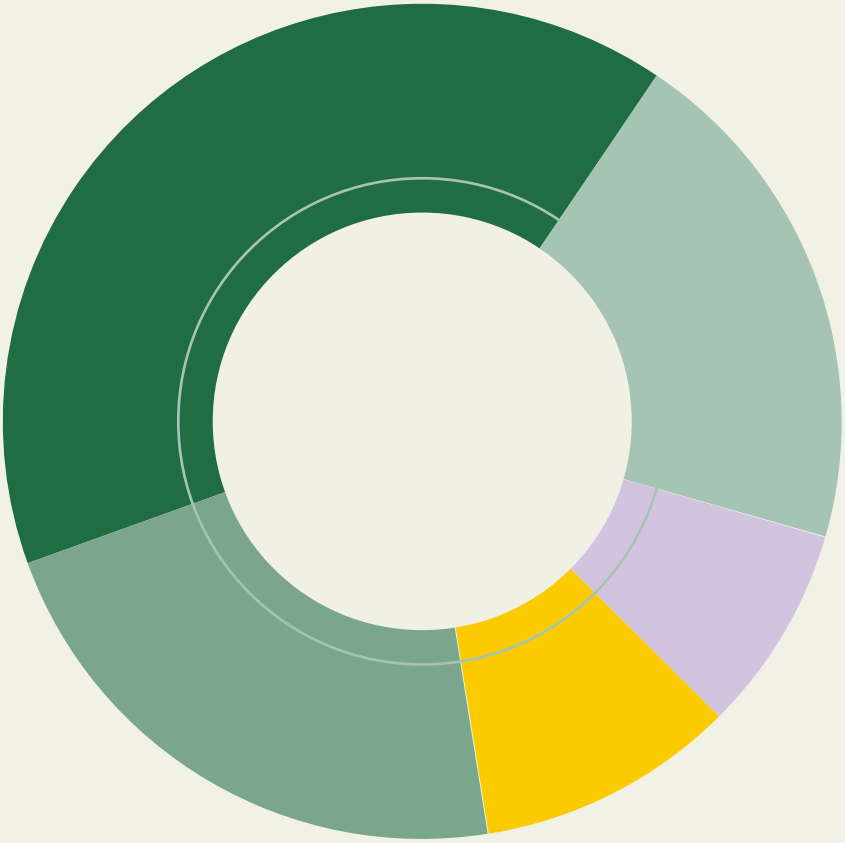
In response to the question regarding awareness of eco-houses, the findings revealed that a majority of the participants, accounting for 78%, were not familiar with the concept. This suggests that there is a significant lack of knowledge or understanding about eco-houses among the respondents.

On the other hand, 22% of the participants demonstrated awareness of eco-houses, indicating some level of familiarity with the concept. These individuals may have a basic understanding of eco-friendly construction methods, energy-efficient features, and sustainable design principles that are characteristic of eco-houses.

However, the substantial majority of respondents being unaware of eco-houses highlights the need for increased education and awareness campaigns to promote the benefits and importance of eco-friendly housing solutions in mitigating environmental impacts and enhancing sustainability in the built environment.

An analysis of the participants' answers provides valuable insights into their perceptions and practices related to interior ecology.

The most commonly mentioned aspect of interior ecology was the concern for lower home costs, with 40% of respondents highlighting this factor. This suggests that participants view interior ecology as a means to save energy, water, and other resources, as well as reduce operating costs. It indicates a practical approach where energy efficiency and resource conservation play a significant role in their decision-making process.



**Do you know what an eco-house is?**

**40%** lower home costs

**22%** use of natural materials

**20%** buying used items

**8%** refurbishing old furniture

**10%** others

Another notable aspect mentioned by respondents was the use of natural materials, with 22% emphasizing the preference for materials such as wood, cork, and cotton fabrics. This indicates a concern for the health and comfort of users, as natural materials are often considered more sustainable and environmentally friendly alternatives to synthetic or non-renewable materials.

Furthermore, 20% of respondents mentioned buying used items, while 10% highlighted refurbishing old furniture and objects. These practices reflect a commitment to reducing waste and extending the lifespan of products, aligning with principles of circular economy and sustainability.

Other common suggestions included reducing plastic consumption, segregating waste, and incorporating natural lighting and air filtration through the use of plants.

These actions demonstrate an awareness of the negative environmental impacts of plastic, the importance of waste management, and the potential benefits of biophilic design in creating healthier indoor environments.

However, it is important to note that the responses were quite diverse, indicating varying levels of awareness and knowledge about interior ecology.

## A significant portion of respondents (77 out of 99) admitted to having no knowledge of the term "interior ecology." This suggests that there is a need for further education and awareness-raising initiatives to promote understanding and adoption of sustainable practices within the context of interior design and home environments.

In summary, the participants' responses highlighted the importance of cost-saving measures, the use of natural materials, and the adoption of sustainable practices such as buying used items and refurbishing furniture. However, the diverse range of responses and the significant number of participants lacking knowledge about interior ecology indicate a need for further education and awareness to foster greater understanding and engagement with sustainable practices in interior design.

# 69%

of respondents answered that they do not know the answer or have a lack of knowledge about waste management

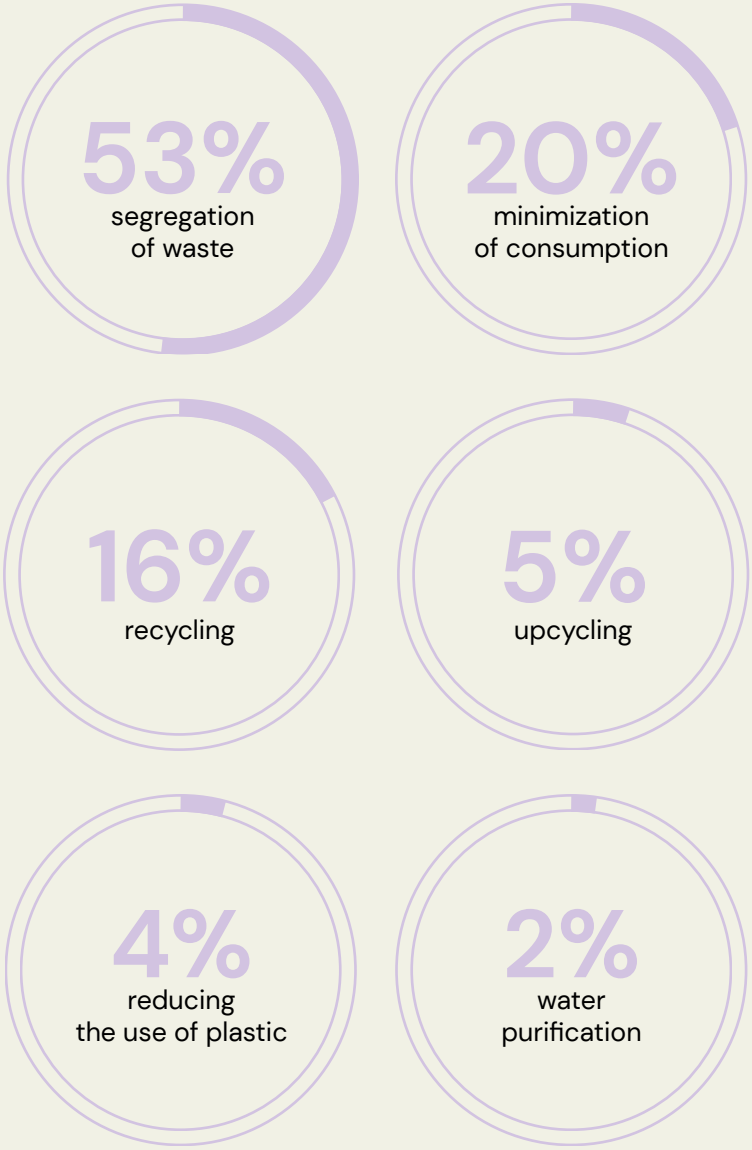
05.

## Knowledge regarding waste management

The vast majority of respondents are aware of the overall goal of waste management - to process waste in a sustainable manner to minimize environmental impact. Respondents mention various ways in which this goal can be achieved, such as recycling, reuse, waste separation, placing trash by color, green spots, etc.

A few people are familiar with more specific aspects of waste management, such as transformation processes, processing of different types of waste, and activities needed to process waste from generation to disposal or reuse. The most frequently indicated responses regarding waste management were:

**Do you know what is covered by the term waste management?**




The analysis of the responses indicates that a significant portion of the participants lack knowledge or are uncertain about waste management practices. Despite this, there is a general awareness of the overall goal of waste management, which is to process waste in a sustainable manner and minimize its environmental impact.

Among the respondents who provided answers, the most frequently mentioned approach to waste management was waste segregation, with 52 responses. This highlights the recognition of the importance of separating different types of waste to enable more effective recycling and disposal processes. Additionally, 20 respondents emphasized the need to minimize consumption, suggesting an understanding of the significance of reducing waste generation at the source.

Recycling was another commonly cited aspect of waste management, with 16 responses. This indicates a level of awareness regarding the importance of recycling materials to conserve resources and reduce the amount of waste sent to landfills. A smaller number of respondents, around 5, mentioned upcycling, which involves transforming waste materials into new products of higher value.

Moreover, there were a few mentions of reducing the use of plastic, reflecting an awareness of the environmental impact of plastic waste and the need to find alternative solutions. Additionally, a couple of responses acknowledged the importance of water purification as a part of waste management practices.

Results highlight the need for further education and awareness campaigns to enhance knowledge and promote more comprehensive waste management practices among the respondents.

# 05.

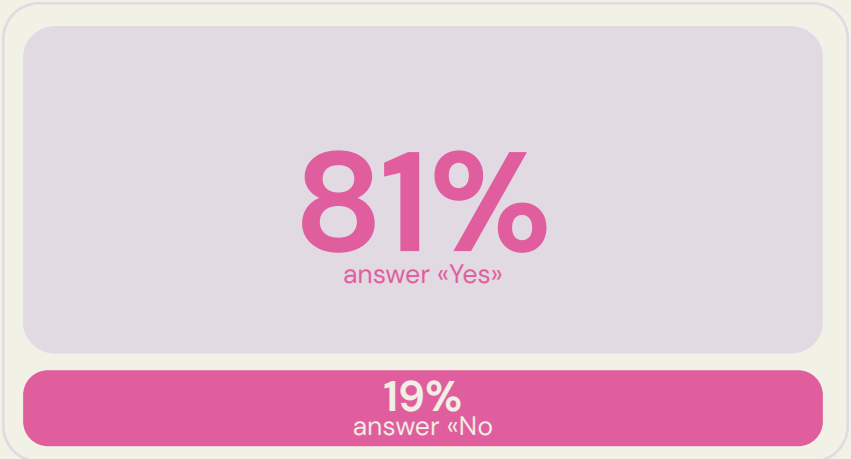
## Knowledge regarding awareness of the impact of diet on the environment

An analysis of the responses reveals the following key findings regarding the impact of diet on the environment:

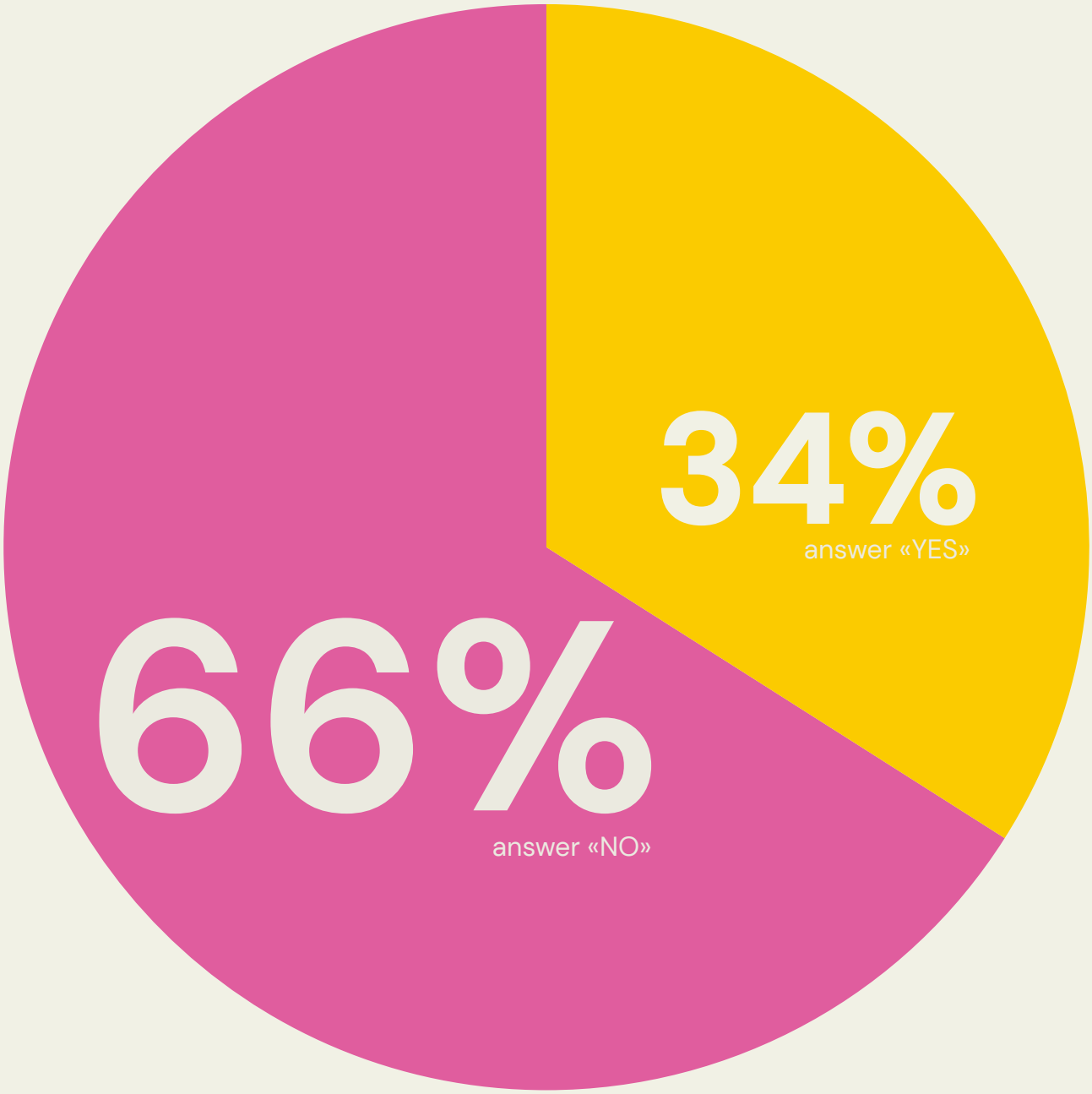
- 76% of respondents are aware of the environmental impact of their diet.
- The majority of respondents (76%) recognize that meat production contributes to CO2 emissions and water consumption.
- Pollution generated by animal farming and the benefits of buying local products are also acknowledged.
- 24% of respondents are uncertain about the impact of diet on the environment.
- Some respondents highlight that a vegan diet is the most sustainable option, while consuming processed and imported products increases greenhouse gas emissions and waste.
- Commonly mentioned points include: the environmental resources required for food cultivation and production, the polluting nature of meat production, the energy-intensive and polluting effects of long-distance food transportation, the harmfulness of food waste (with composting being a positive solution), and the positive impact of eating less food.
- Choosing foods with lower emissions and a reduced reliance on non-renewable resources is highlighted as a way to mitigate the environmental impact of one's diet.

Overall, the responses demonstrate a growing awareness among respondents about the connection between diet and the environment, with a majority acknowledging the environmental implications of their food choices.

**Are you aware of how your diet affects the environment?**



**Have you ever participated in a training session on ecology and/or environmental protection?**




Based on the consultations, it is evident that a significant portion of the respondents (65 out of 99) have not participated in a training session on ecology and/or environmental protection. This indicates a potential gap in knowledge and awareness among the participants regarding these topics.

The fact that 34 respondents have participated in such training sessions suggests that there is some level of interest and engagement in learning about ecology and environmental protection. However, considering the total number of respondents, the percentage of those who have received training remains relatively low.

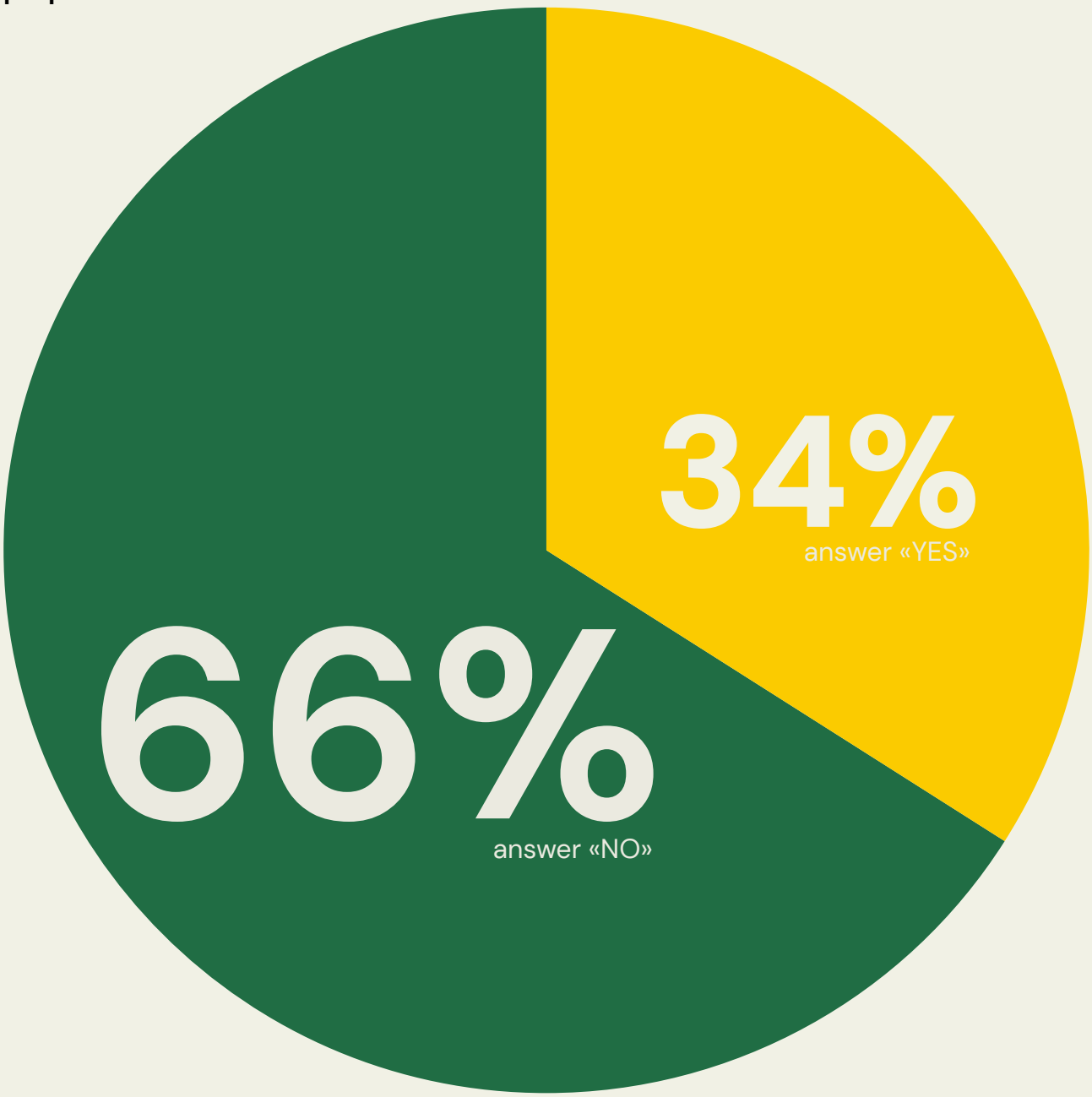
**These findings highlight the need for more education and awareness-raising efforts in the field of ecology and environmental protection. There is a significant portion of the population, represented by the majority of respondents, who have not had the opportunity to participate in training sessions on these topics.**

Providing accessible and comprehensive training programs can help bridge this knowledge gap and empower individuals to make more informed decisions and take proactive actions to protect the environment.

Expanding the availability of training sessions on ecology and environmental protection can contribute to building a more environmentally conscious society. By equipping individuals with knowledge and skills in these areas, we can foster a deeper understanding of environmental issues and encourage sustainable practices in various aspects of life. It is crucial to prioritize the dissemination of information, educational initiatives, and training programs that cater to diverse audiences and address the specific needs and interests of young people.

Efforts should be made to collaborate with educational institutions, community organizations, and governmental bodies to develop and implement comprehensive training programs that cover various aspects of ecology and environmental protection. By engaging individuals early on and providing them with the necessary tools and knowledge, we can cultivate a generation that is actively involved in environmental conservation and works towards creating a sustainable future.

**Have you ever used a game for educational purposes?**




## A considerable portion of the participants has already experienced the benefits of using games as a tool for learning and engagement.

- Among those who have used a game for educational purposes, 60% respondents rated their interest in learning more about waste management through a serious game as «5» (very interested), 30% respondents rated their interest as «4», and 10% respondent rated their interest as «3».
- Among those who have not used a game for educational purposes, 60% of respondents rated their interest in learning more about waste management through a serious game as «5» 37% as "4» (moderately to very interested), while 3% respondents rated their interest as „3».

[21]

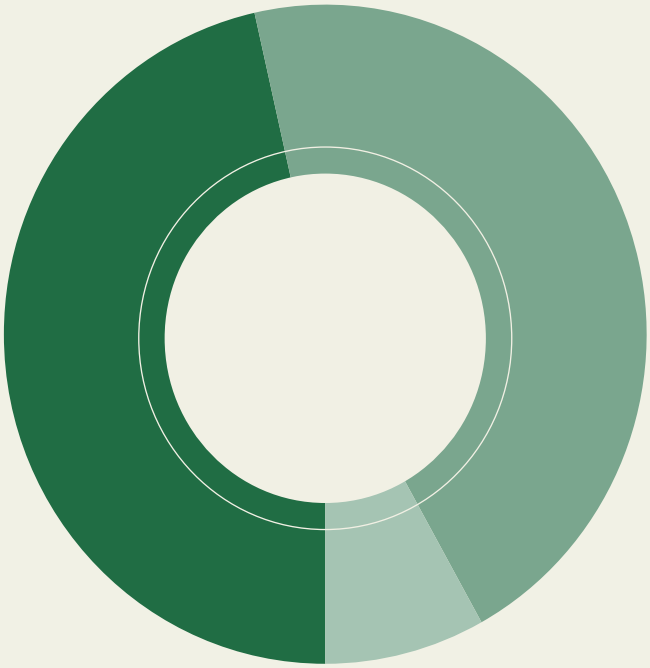
- Among those who have used a game for educational purposes, a majority of 60% expressed a high level of interest (rated as «5») in learning more about waste management through a serious game. This indicates a strong enthusiasm for using gamified approaches to educate and raise awareness about waste management.
- On the other hand, among the respondents who have not used a game for educational purposes, a similar proportion of 60% also expressed a high level of interest (rated as «5») in learning more about waste management through a serious game. Additionally, 37% of these respondents rated their interest as «4,» indicating a moderate to high level of interest. Only 3% of the respondents showed a lower level of interest (rated as «3»).

These findings suggest that there is a significant level of interest among both groups, those who have used educational games and those who have not, in using a serious game to learn about waste management. This indicates a potential opportunity to leverage gamification as an effective educational tool to engage and educate individuals on environmental topics.

Given the high interest expressed by both groups, there is potential for serious games focused on waste management to effectively capture the attention and motivate individuals to learn and take action in this area. Designing and implementing well-designed serious games that provide educational content and interactive experiences can be a powerful approach to promote knowledge acquisition and behavior change related to waste management.

Therefore, considering the interest expressed by respondents, it is recommended to explore the development and implementation of serious games that specifically target waste management education. These games should be engaging, interactive, and provide meaningful learning experiences to effectively convey the importance of waste management practices and motivate individuals to adopt sustainable behaviors in their daily lives.

**Which type of playing modes do you prefer?**



**48%** multiplayer games

**45%** mixed mode

**5%** single player

The majority of respondents (46 out of 99) prefer multiplayer games, followed by mixed mode (45 out of 99). Only 8 respondents prefer single player games. There was only one respondent who preferred multi-actor games, and no one preferred multi-character games.

It appears that most respondents prefer mixed modes of playing, which include both single player and multiplayer modes. There are also a significant number of respondents who prefer multiplayer modes of playing. A few respondents prefer single player games, while some prefer a mix of multi-actor and multi-character playing modes.

Overall, it seems that most people enjoy playing games that offer a mix of modes, with a preference for multiplayer modes. This could be due to the social aspect of multiplayer games, which can be more engaging and enjoyable for some players.

# CONCLUSIONS

**In light of our research and consultations with young people, gamification appears to be a promising tool for increasing environmental awareness and youth engagement. Combining environmental education with game elements not only makes the learning process more engaging and fun, but also develops the skills and attitudes needed in the context of sustainable development. In the context of global environmental challenges, we need the active involvement of youth as a force for future change.**

Gamification gives us the opportunity to reach young people in a way that feels natural and appealing to them.

Through participation in gamified educational programs, youth can take control of their learning and actions, while developing the skills necessary to solve environmental problems. Increasing environmental awareness among young people is crucial to building a sustainable future. Through gamification, we can spark their passion, creativity and commitment to environmental protection. The use of games and competitive elements allows for active participation, cooperation and hands-on experience, which fosters a more permanent absorption of environmental knowledge and values.

At the same time, gamification provides an opportunity to create an environmental community where young people can share their achievements, inspirations and ideas. Through interaction and collaboration with peers, social skills are developed, bonds are built and environmentally focused initiatives are created. This promotes a collaborative approach and mobilizes youth to creatively solve environmental problems.

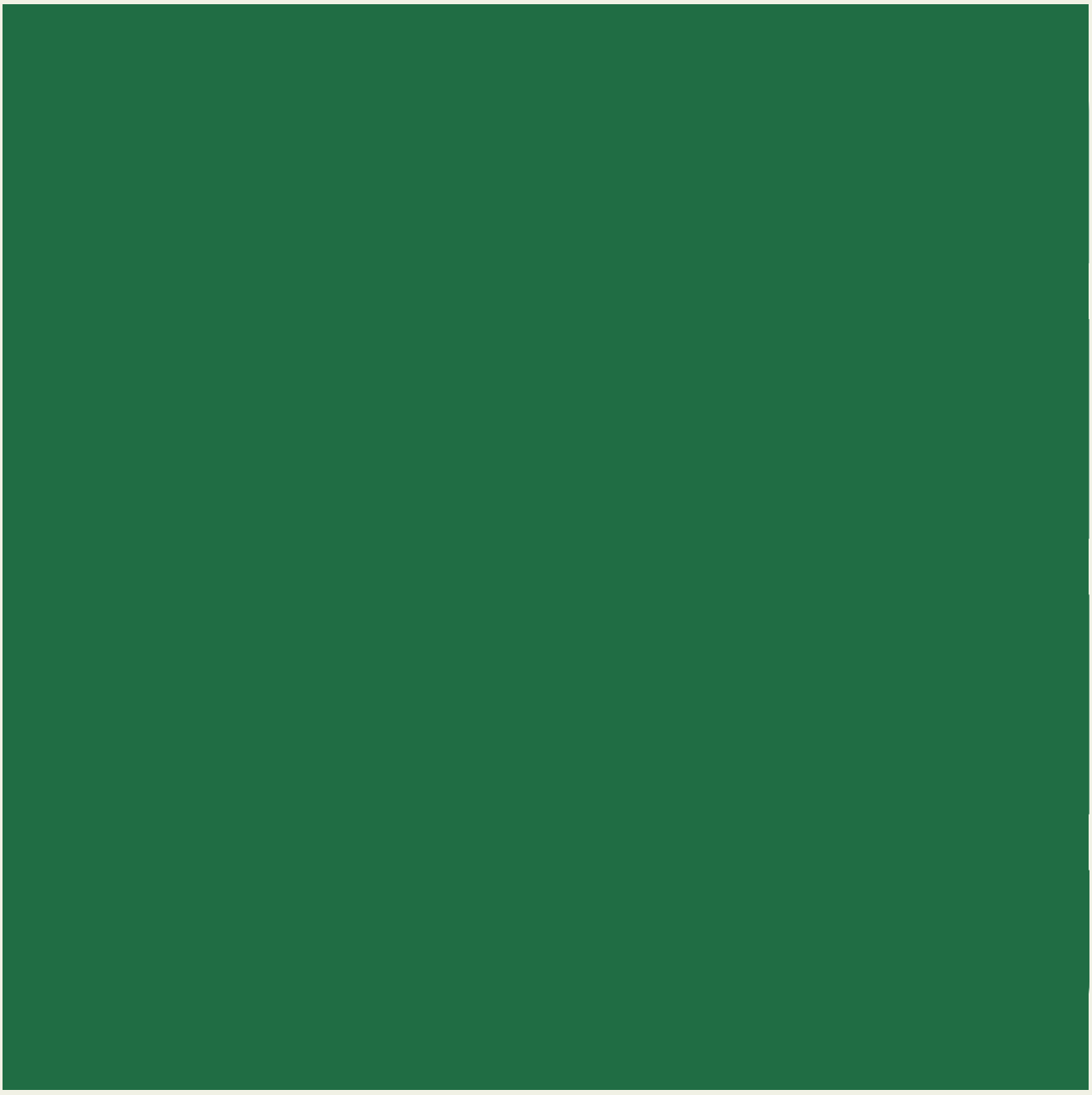
Finally, gamification can contribute to long-term changes in youth attitudes and habits in the context of environmental protection. Through repeated actions and systematic rewards for positive behavior, young people can develop pro-environmental habits that will follow them throughout their lives.

This, in turn, influences the creation of a more sustainable community and global community. The findings of our research and consultations with young people clearly indicate that gamification is an effective way to increase environmental awareness and youth engagement. With proper design and implementation of gamified educational programs, we can inspire young people to take action to protect the environment and build a sustainable future. This is the key and meaning of the mission of which they are a part.

It is also important to note that gamification not only increases the environmental awareness of young people, but also develops their critical thinking, problem-solving, teamwork and decision-making skills. Through interactive challenges, simulations and tasks, they learn to analyze situations, make rational decisions, take risks and consequences of their actions. These skills are extremely valuable not only in the context of environmental protection, but also in their future personal and professional lives.

## Gamification can also be a platform for exploring innovative environmental solutions. By creating virtual environments and simulations, young people can test different strategies and approaches, experiment with alternative behavioral models and implement innovative technologies. This gives them the opportunity to develop creative thinking skills and ignite a passion for solving environmental problems.

The findings of our analysis of research and consultations with young people clearly indicate that gamification has the potential to increase environmental awareness and youth engagement. It is an innovative approach that transforms the process of environmental learning and action into an interesting, engaging and rewarding adventure. Through the use of games, competition, rewards and cooperation, we can build a community of young environmental leaders who will strive to create positive change in our world. In the context of a rapidly changing world and the urgent need to protect the environment, gamification is a tool that can transform young people into active and committed defenders of our planet. Therefore, it is worth pursuing the further development and implementation of educational programs based on gamification in order to build a society that cares about and works for the environment.



Erasmus+