

# IT-ARGF

## Innovative Training - Augmented Reality for Green Food

Project. Reference no. 2021-1-MK01-KA220-VET-000025293

### Topic Report Summary Project result 2



НАЦИОНАЛНА АГЕНЦИЈА  
ЗА ЕВРОПСКИ ОБРАЗОВНИ  
ПРОГРАМИ И МОБИЛНОСТ



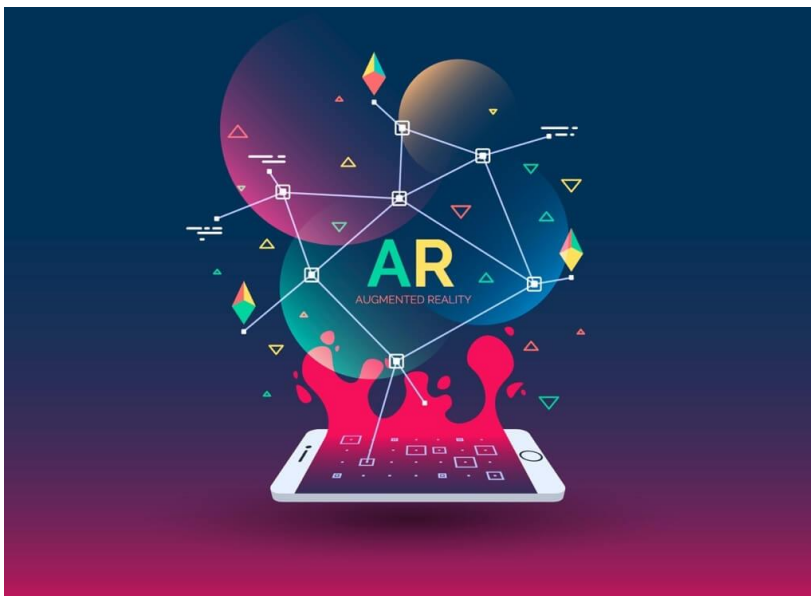
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Институт за развој на заедницата  
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## Summary of Key Findings



The Commission in its EU biodiversity strategy to 2020 individualized a set of Actions towards the preservation of biodiversity. Among those the Action 9 “Better target Rural Development to biodiversity needs and develop tools to help farmers and foresters work together towards biodiversity conservation” highlights the necessity to develop rural strategies and programmes tailored for regional and local levels. Most of the countries have adapted EU regulations for biodiversity protection.

# Summary of Key findings

## Challenge 1

Farmers need to be educated to prevent farmland biodiversity disappearing and maximize crops capacity by providing tools and knowledge through technology.

## Challenge 2

The lack of training in the biodiversity sector is a major issue, and there is a need for system-based change in education to increase creative and practical training.

## Challenge 3

To make the needs assessment more tangible, a delimitation of the study aspects has been carried out.

*Based on the information provided, we can conclude that digital learning tools and opportunities including the availability of e-learning materials, online training and best practices in the field of food production and biodiversity conservation vary significantly between the countries Hungary, Greece, Turkey, North Macedonia and Spain.*

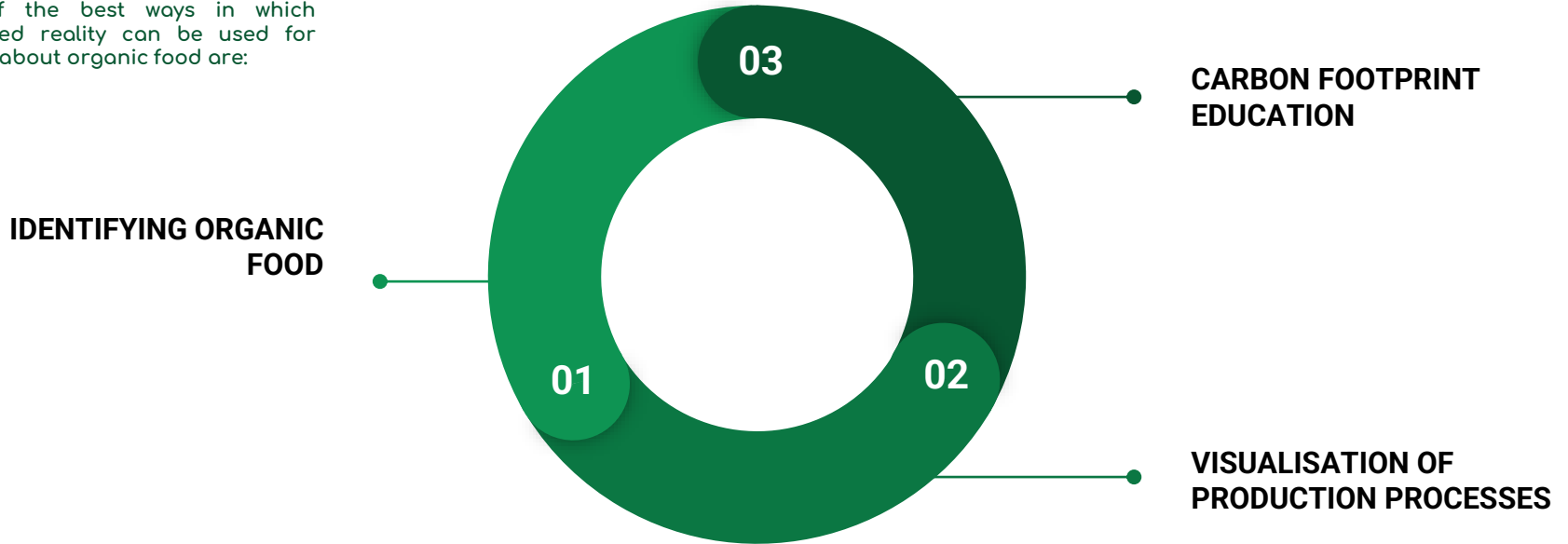
## Summary of Key Findings



The **inclusion of augmented reality** in different fields means having the advantages related to its use, as it is a technology that allows virtual elements to be superimposed on the real world through technological devices such as smartphones or smart glasses. Specifically in the field of organic food, augmented reality offers a number of opportunities and tools for digital learning, so this project aims to increase the level of skills in the fields of organic food production and contribute to the improvement of biodiversity through a technological framework for joint action, where augmented reality will be included.

## Summary of Key Findings

Some of the best ways in which augmented reality can be used for learning about organic food are:



In general, augmented reality, by allowing users to interact with virtual information and visualisations in real time, helps to improve understanding and informed decision-making on organic food.

## Summary of Key Findings

From the research in the project partner's countries it is obvious that there is a need for training of the farmers. Some of the useful topics are:

1

Introducing of new Innovative Technology and Technical skills improvement

2

Business and Managerial skills improvement

3

Improvement of the quality, quality standards and quality system implementation

4

Sustainable Management of Natural resources, Landscape conservation and Environment protection

## Summary of key findings

*Each country of the project partners has described the used mentoring instruments and strategies in their country. Measuring each country's organic production system, questioning its action plan and practices for organic food production provides a reflection of each country to the readers.*

### Hungary

Agricultural training which was only focused on higher education as an independent organic farming course is no longer available. There are no forms of independent training and curriculum and regarding the digital curriculum, there are no specific tools developed.

### Turkey

There are VET centers that deliver training for farmers in accordance with environment protection and protection of biodiversity, there are many governmental and nongovernmental organizations that provide digital literacy to farmers. However, most of them are related to organic farming and good farming practices.

### The Republic of North Macedonia

There is a low level of implementation of non-formal education by adult education centers, employment centers, etc. in each of the agricultural areas in the country. Also, there is lack of educational materials in the field of organic production and lack of exchange of information from the region. The categories of educational activities are divided into two as Non-formal education (training, courses, and seminars) and Formal education (postgraduate and doctoral studies).

### Spain

There are numerous Spanish organizations offering online training in the agricultural sector. However most of them provide online trainings without providing the digital curriculum privately and at a cost. Currently, organic and sustainable agriculture seems to be on the rise in Spain, so there are variety of training courses on the subject.

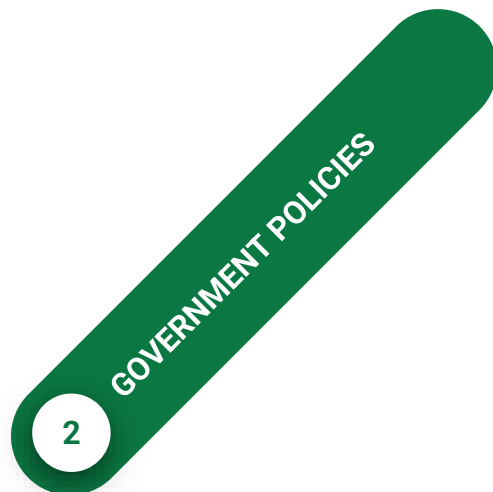
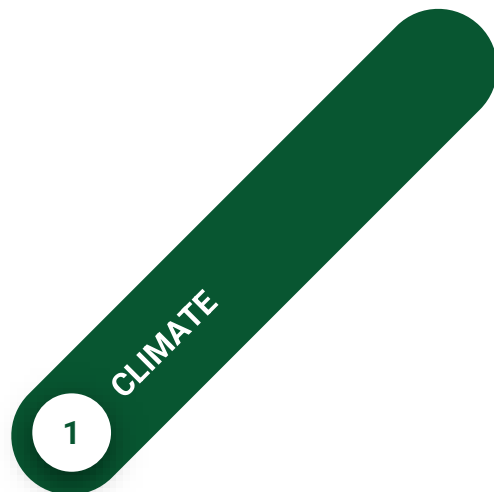
### Greece

There is a national strategy for agriculture and food, which prioritizes organic food production in Greece, and gives support of lower taxes to farmers and producers but hasn't mentioned any digital learning curriculum.

## Summary of key findings

Based on the research conducted by project partners, we can conclude that digital learning tools and opportunities including the availability of e-learning materials, online training and best practices in the field of food production and biodiversity conservation vary significantly between the countries Hungary, Greece, Turkey, North Macedonia and Spain.

Variations between partner countries may be due to factors such:





## Summary of Key Findings



There is therefore a wide range of e-learning materials available in the five countries participating in the project, including videos, manuals, courses and online training programmes. In general, these materials are designed to help farmers and food producers improve their farming practices and protect biodiversity. Spain and Hungary appear to have a broader and more developed offer in this area, with specific courses and programmes for different agricultural sub-sectors. Countries also have different approaches to best practices in food production and biodiversity conservation. For example, North Macedonia has developed a certification system for organic products, while Greece has a strong focus on organic olive and olive oil production. Hungary and Spain have a wide variety of agricultural crops and sub-sectors, which is reflected in the diversity of their online training materials. Overall, we can conclude that each country has its own strengths and weaknesses in terms of offering e-learning materials, online training and best practices in food production and biodiversity conservation.

However, all countries are committed to improving agricultural practices and protecting the environment, and are making significant efforts to promote online education and training in this area.

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