



Development of Courses for Sustainable Waste Management for Municipalities (ENCOURAGE) 2021-1-PL01-KA220-VET-000030417

# **REPORT**Survey analysis and interviews

Benchmarking analysis
Decision makers
Employees
Teachers

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# INTRODUCTION

The objective of the analysis is to provide complete and accurate illustration of the current situation in the waste management sector in each partner country, and to compare the performance between different EU and project partner countries in order to discover best practices that may be implemented. In total, we collected 248 survey results in five countries. In this report, we present the results of the research conducted.





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# Benchmarking analysis

Comparison of selected issues from the survey













# What practices does your municipality implement regarding waste management?

#### Cyprus

- Household waste collection
- Inform citizens about green spots
- Collect and transport of prunings placed in the special paper bags purchased by citizens from the municipality for recycling
- Partnership s with another company for waste management such as recyclable materials (aluminum, paper, plastic)
- Inform citizens about recycling points, clothing, batteries, bulky waste
- Inform citizens about home composting
- One
   municipality from our sample
   mentions that they
   implement the PAYT sysem in
   their municipality and they
   push the dining services to
   cooperate with CYPRA Ltd for
   a separate organic collection.

#### Greece

- Recycling: Packaging (Blue bin), Green points of rewarding recycling (Glass bottles, Plastic Bottles, Aluminum cans) and paper, Clothes and shoe collection bins)
- Disposal in sanitary landfills, sorting
- Packaging recycling (blue bin), Green points (rewarding recycling glass bottles, plastic bottles, aluminum cans), Clothes/shoes.
- Collection of mixed waste (organic and other) going to landfills and packaging waste (mixed paper glass aluminium) ("blue bins")
- Disposal without sorting, sorting for certain species

#### North Macedonia

- We try to apply a circular economy
- Paper and battery waste recycling, electronic waste, selection of glass and plastic;
- Acceptance of selected waste by an appropriate transferor - paper, electronic waste, used batteries and municipal waste;
- The municipality has organized locations for recycling glass, paper, plastic and electrical and electronic waste, but part of the recyclable material ends up in a landfill;
- The waste that we throw in containers/waste bins ends up in a landfill without prior selection. Twice a year, in agreement with the city of Skopje, the municipality organizes the collection of bulky waste from households;
- For waste management, practices of collection and transportation to the landfill without prior selection of the waste are used.

#### Poland

recycling (4 responses)

 I have no information on this.
 waste segregation self-segregation composting pickup by companies specializing in the collection of municipal waste

#### Slovenia

- separation and collection separated fractions system
- mechanical sorting
- collection of separated fractions and collection on waste island

# What problems do you face in solid waste management? (very serious and serious)

#### Cyprus

- Inadequate service coverage (some people not given service)
- Lack service quality (not frequent enough, spill, etc.)
- Lack of financial resources
- Lack of trained personel
- Uncontrolled use of packaging material
- Lack of qualified contractors/waste management company
- Lack of control on hazardous waste

#### Greece

- Lack of quality of service (not frequent enough, etc.)
- Lack of power to make financial and administrative decisions
- Lack of financial resources
- Lack of trained staff
- Lack of vehicles
- Lack of equipment
- Frequent breakdown of old vehicles / equipment

#### North Macedonia

- Lack of vehicles
- Lack of equipment
- Uncontrolled proliferation of squatter settlements
- Difficult to locate and acquire landfill site
- Difficult to control contractual service
- Lack of control on hazardous waste
- Rapid urbanization outstripping service capacity
- No proper institutional set-up for solid waste management service
- Lack of financial resources

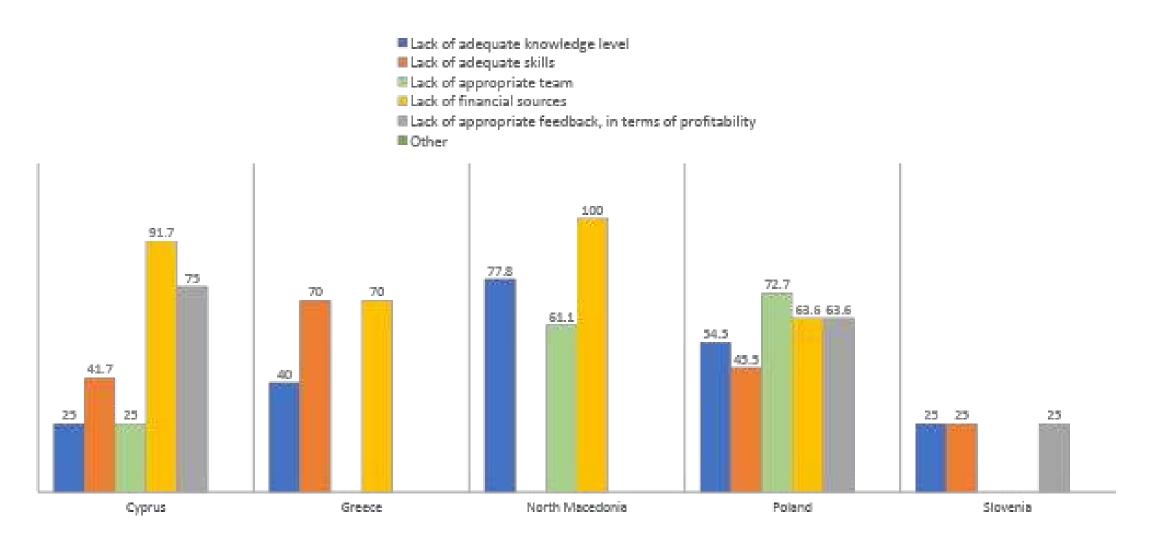
#### Poland

- Lack of financial resources
- Poor public cooperation
- Uncontrolled use of packaging material
- Lack of planning (short-, medium- and long-term plan)
- Rapid urbanization outstripping service capacity
- Lack of control on hazardous waste
- A poor organization at the municipal level to waste minimization (reuse/recycling)

#### Slovenia

- 11 % have serious problems
- 22 % serious
- 40 % less serious
- 26 % no problem

What are the three most substantial challenges when applying requirements regarding Sustainable Waste Management?



# Sustainability skills and needs for development – very important

#### Cyprus

- Identify, quantify, verify and coordinate waste to comply with legislative requirements for sustainable waste management services, systems and facilities
- How to plan, design, implement and advance waste management projects, following the sustainable practices
- Encourage product reuse and recycling
- Use the principles of the Circular Economy and encourage the reuse and recycling of products
- Sustainable waste collection and transport practices
- What are the gaps that need to be filled in order to reach "Zero Waste" for waste management

#### Greece

- Identify, quantify, verify and coordinate waste to comply with legislative requirements for sustainable waste management services, systems and facilities
- How to plan, design, implement and advance waste management projects, following the sustainable practices
- Encourage product reuse and recycling

#### North Macedonia

- Identify, quantify, verify and coordinate waste to comply with legislative requirements for sustainable waste management services, systems and facilities
- How to plan, design, implement and advance waste management projects, following the sustainable practices
- Encourage product reuse and recycling
- What are the gaps to be fulfilled in order to emerge 'Zero Waste' Concept Waste Management

#### Poland

- How to plan, design, implement and advance waste management projects, following the sustainable practices
- Encourage product reuse and recycling
- Sustainable practices for Challenges of Waste Management System

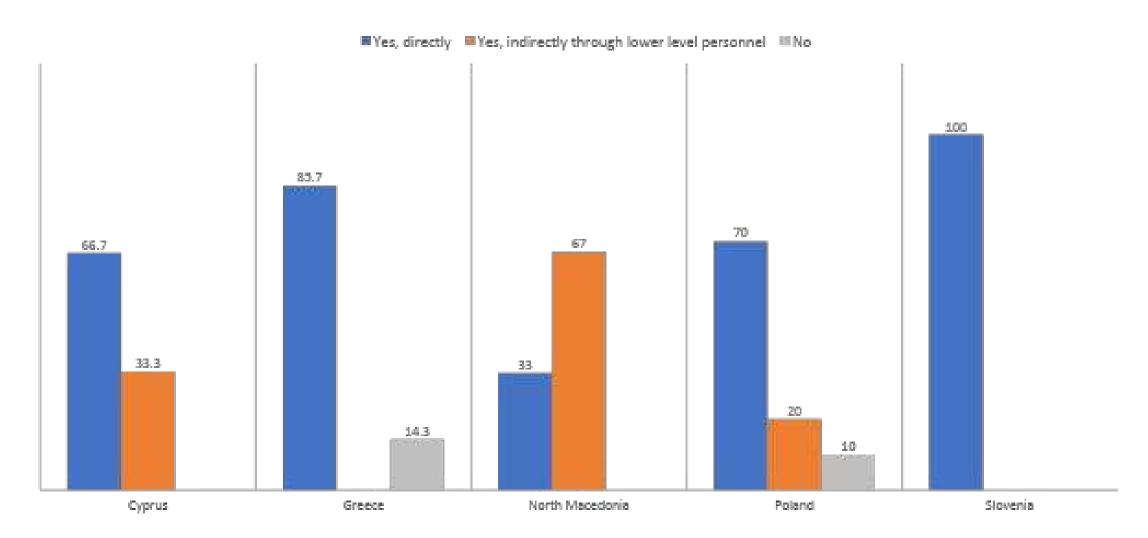
#### Slovenia

- Identify, quantify, verify and coordinate waste to comply with legislative requirements for sustainable waste management services, systems and facilities (75%)
- Encourage product reuse and recycling
- Research, produce and present reports to engage stakeholders in discussions to address waste management
- Sustainable practices for Waste Prevention and Recycling
- Sustainable practices for Challenges of Waste Management System

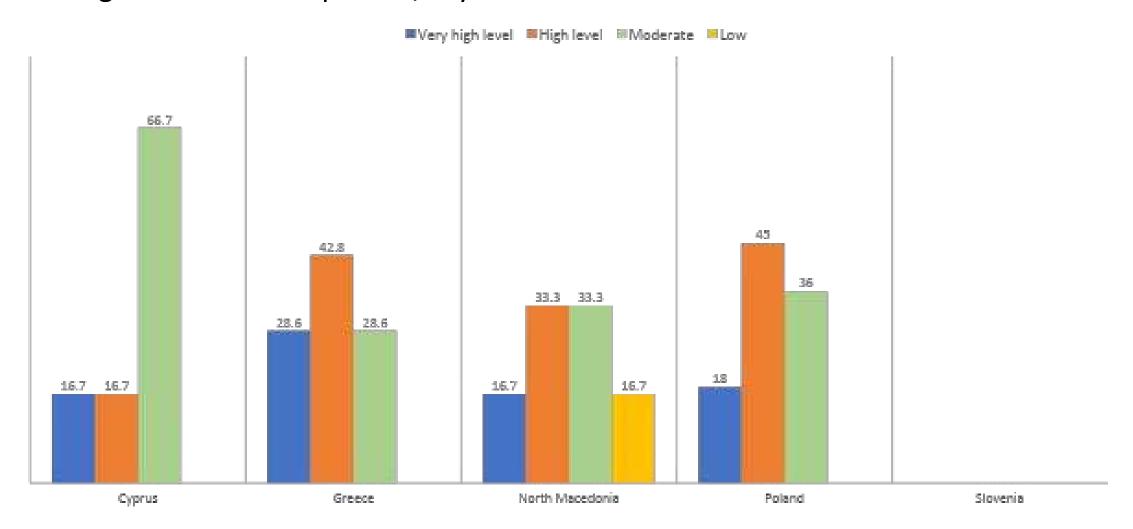
# **DECISION-MAKERS**

Comparison of selected issues from the survey

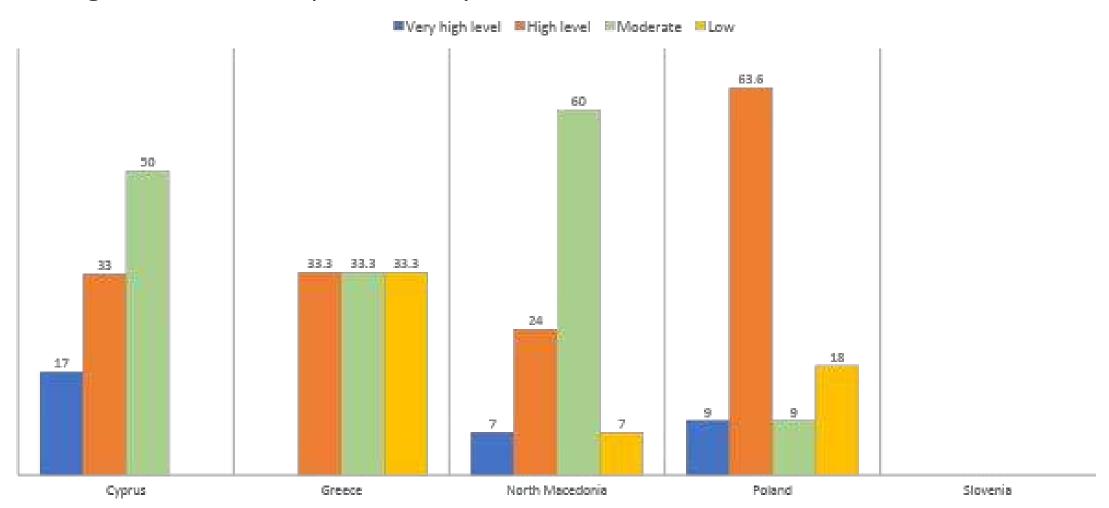
1. Do you supervise the performance of duties by employees related to sustainable waste management?



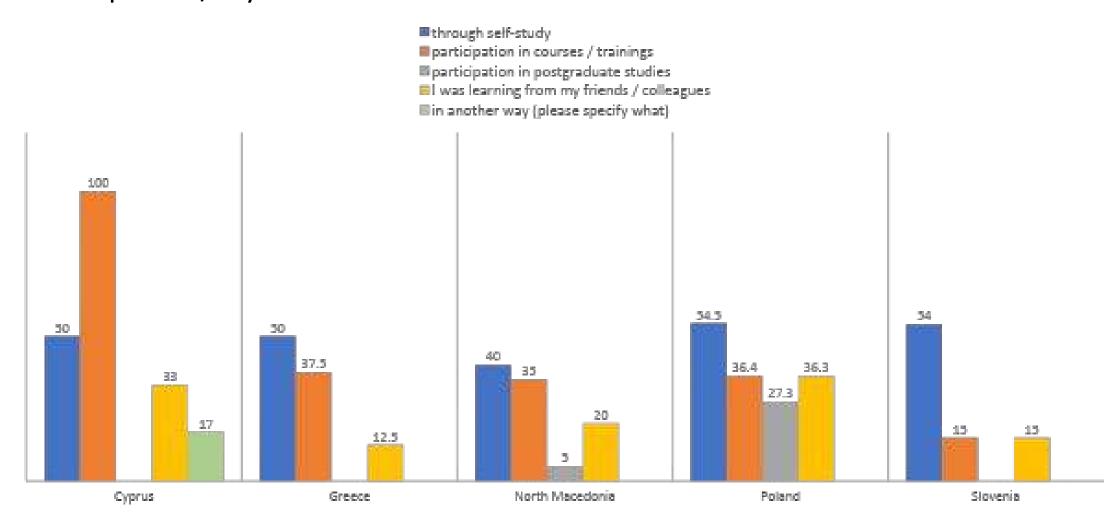
2. Please, give a general assessment of your KNOWLEDGE level regarding the coordination of activities performer by employees in the field of sustainable waste management in municipalities/city?



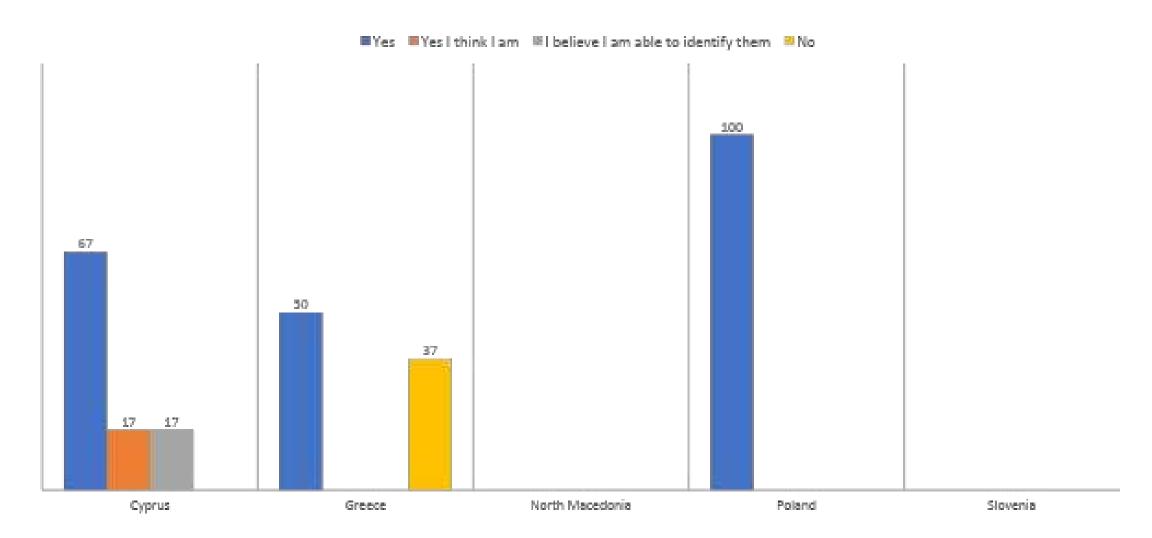
3. Please give a general assessment of your level of SKILLS regarding the coordination of activities performed by employees in the field of sustainable waste management in municipalities / city?



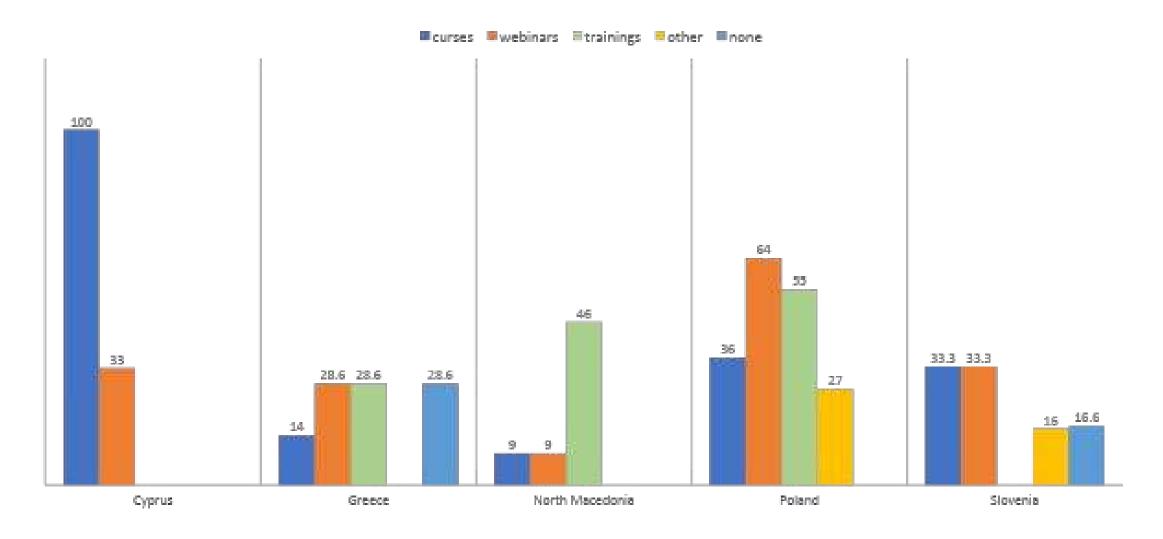
4. How did you mainly acquire the KNOWLEDGE and SKILLS necessary to coordinate employees performing tasks related to sustainable waste management in municipalities/city?



# 5. Are you able to identify the possibility and update of knowledge concerning environmental protection and employer's obligations within this scope?



# 6. What types of training for sustainable waste management do you offer to your employees?



# 7. What are the main requirements for recruiting for positions relating to sustainable waste management?

#### Cyprus

- General knowledge about environment, waste management, recycling
- Knowledge of legislation
- Related degree

#### Greece

- Experience in waste management 62.5%
- Studies 37,5%

#### North Meceodnia

 Regarding the answers main requirements for recruiting positions relating to sustainable waste management are provided in accordance with the Systematization and Education.

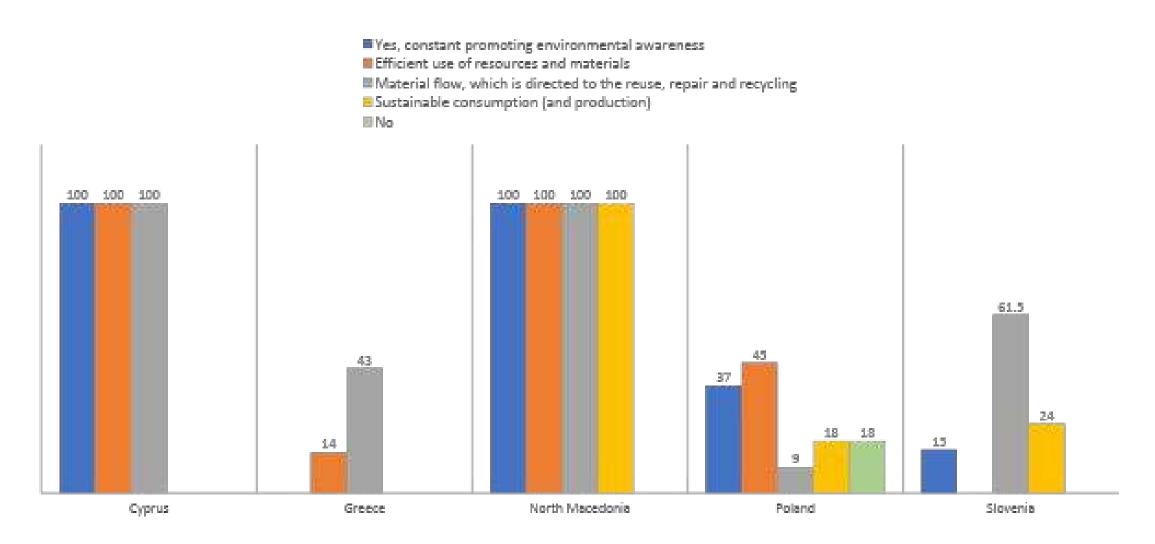
#### Poland

- General knowledge about environment, waste management, recycling
- Experience in waste management
- Knowledge of legislation
- Related degree

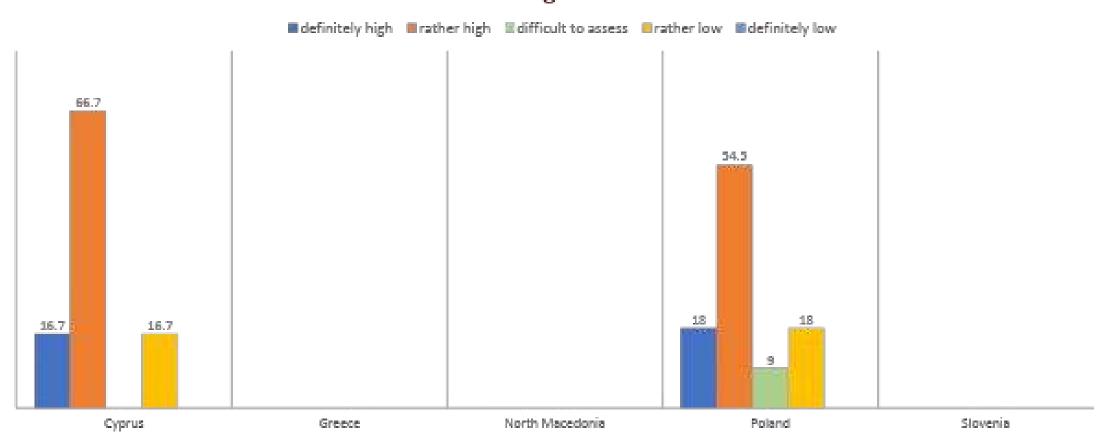
#### Slovenia

No answers

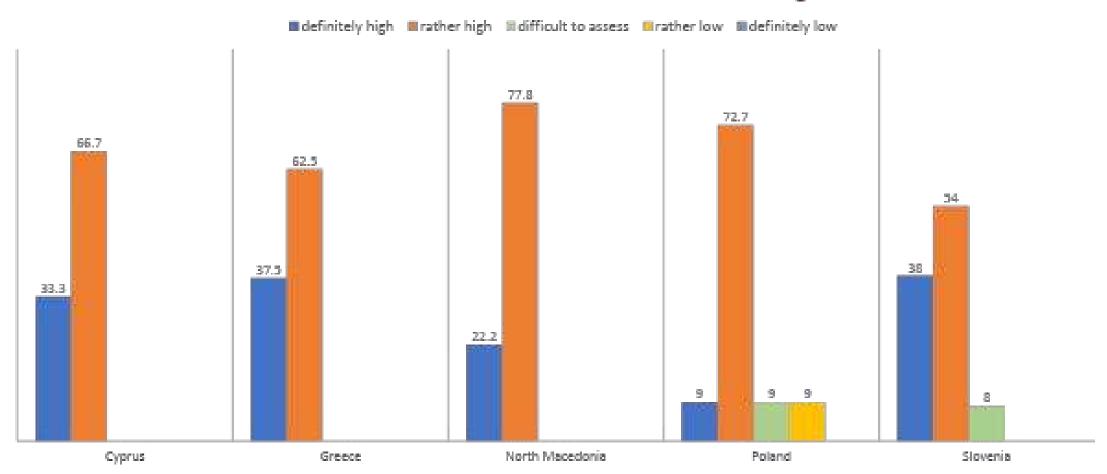
# 7. Does the organization has a policy of raising the environmental awareness within the organization and advice to the employee?



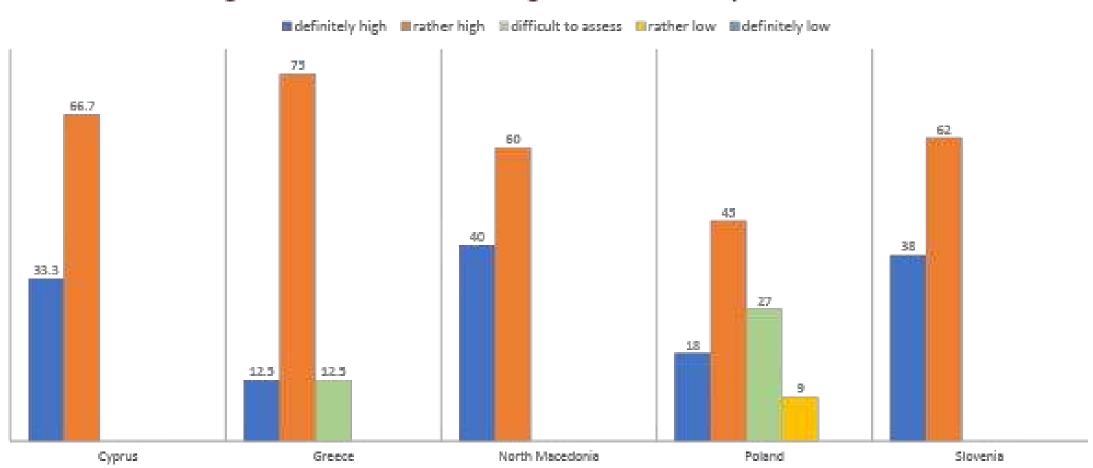
# Coordinating the work of the team in the area of sustainable waste management



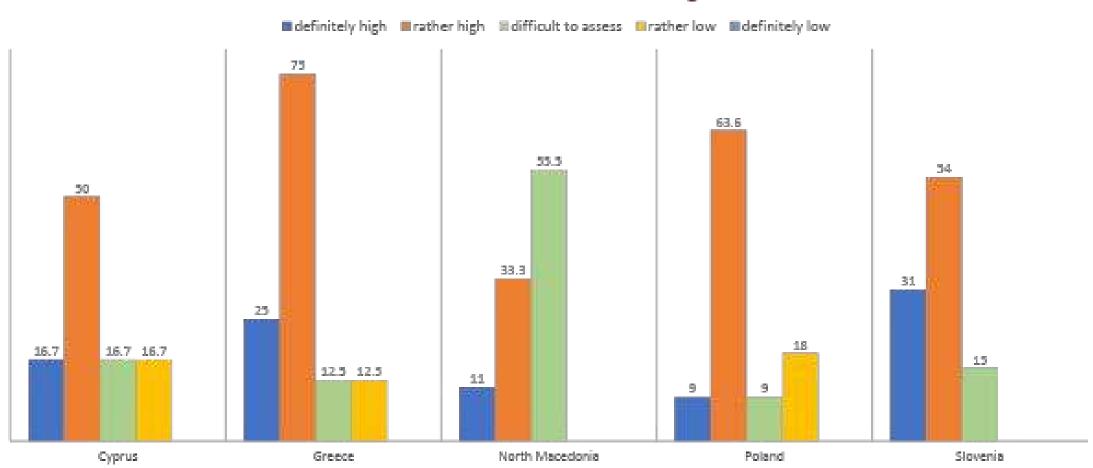
### General information on sustainable waste management



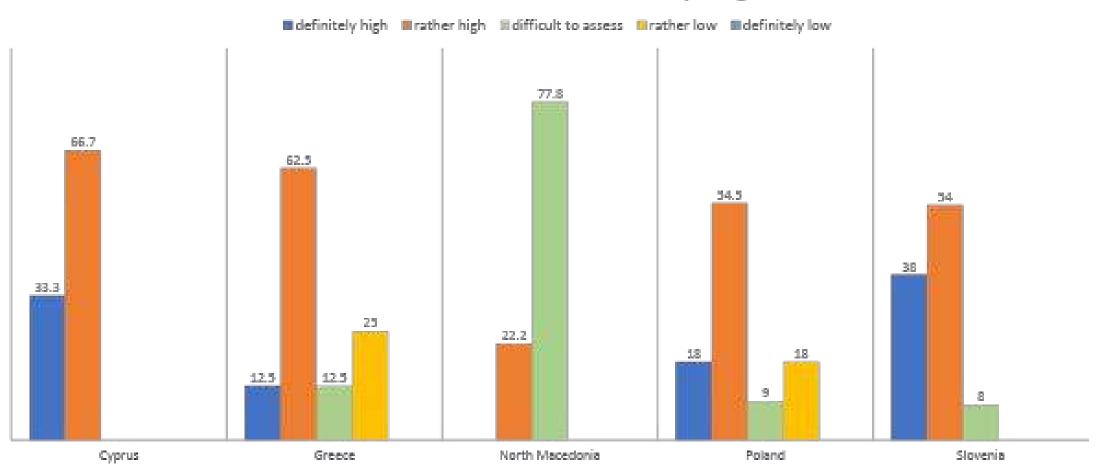
# Organization of waste management in municipalities / cities



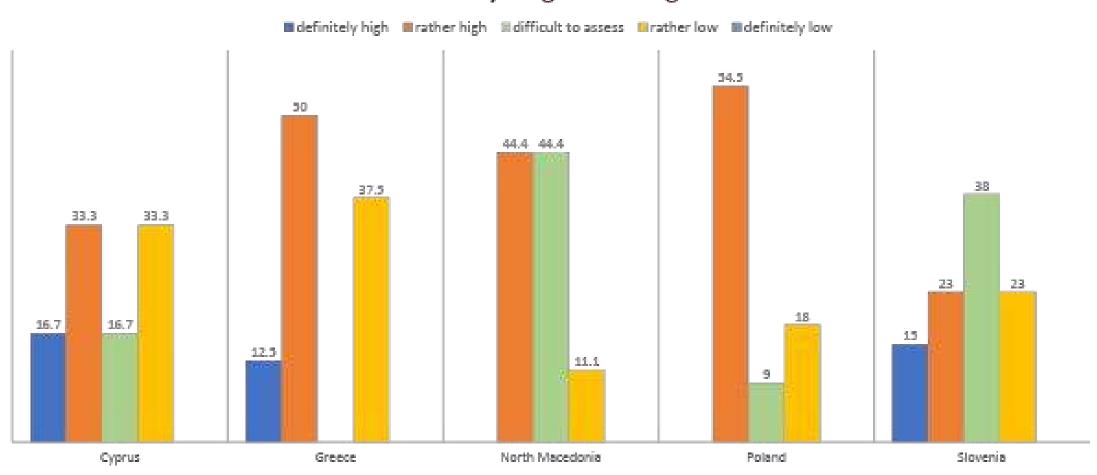
### Documentation of waste management



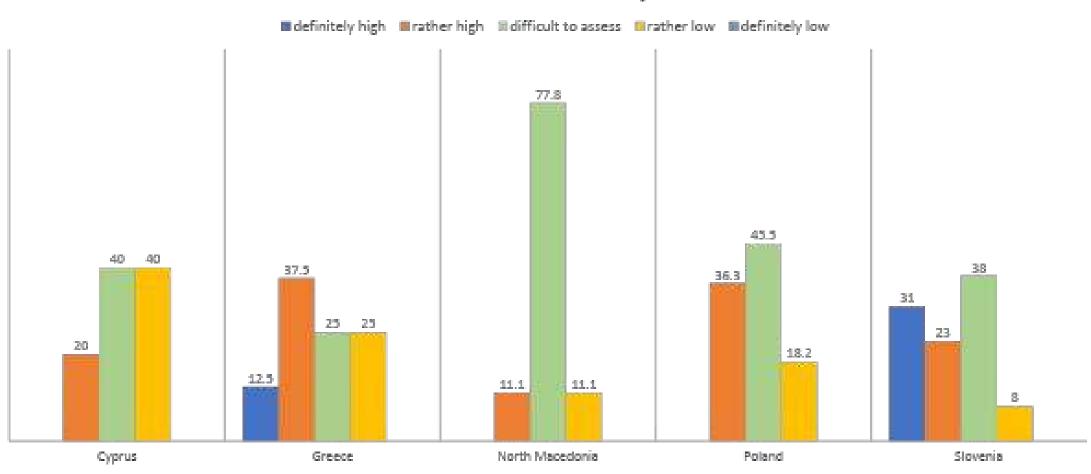
# Waste minimization and recycling



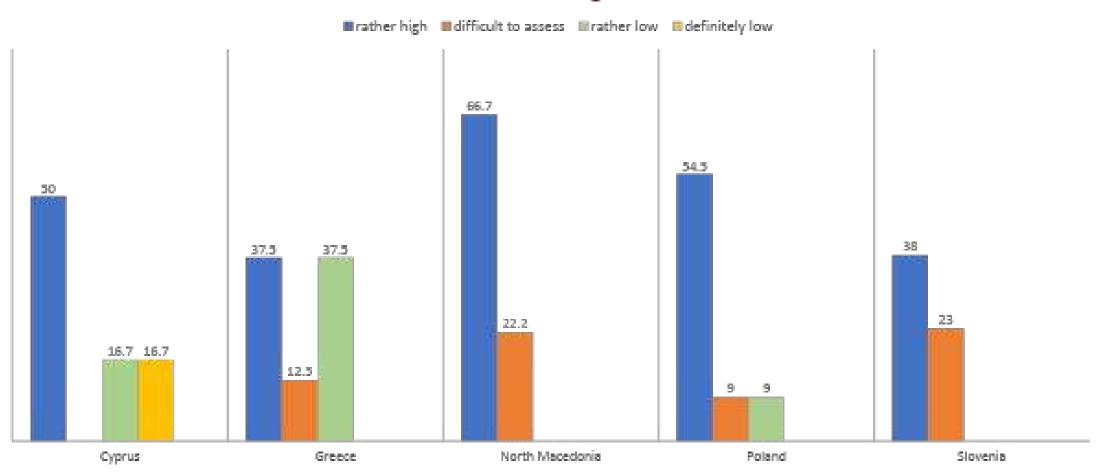
# New recycling technologies



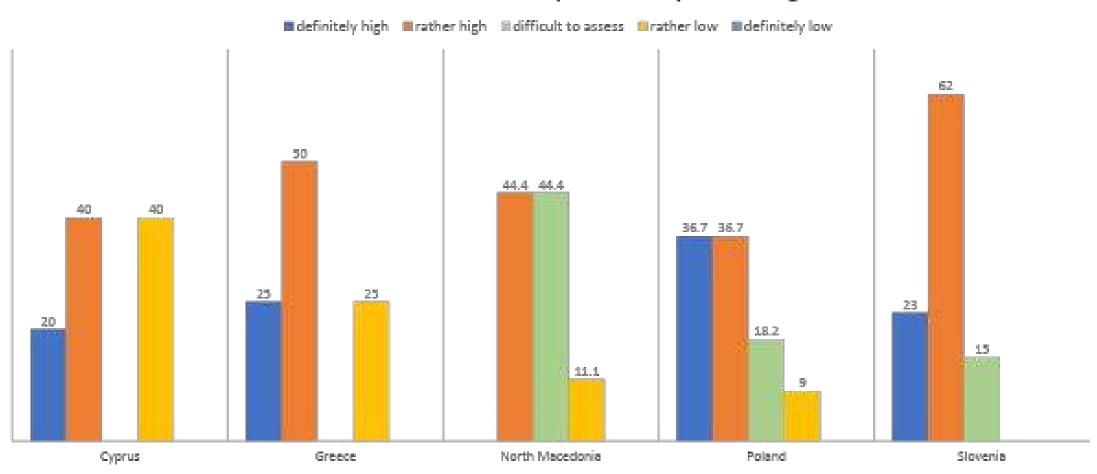
### Circular economy



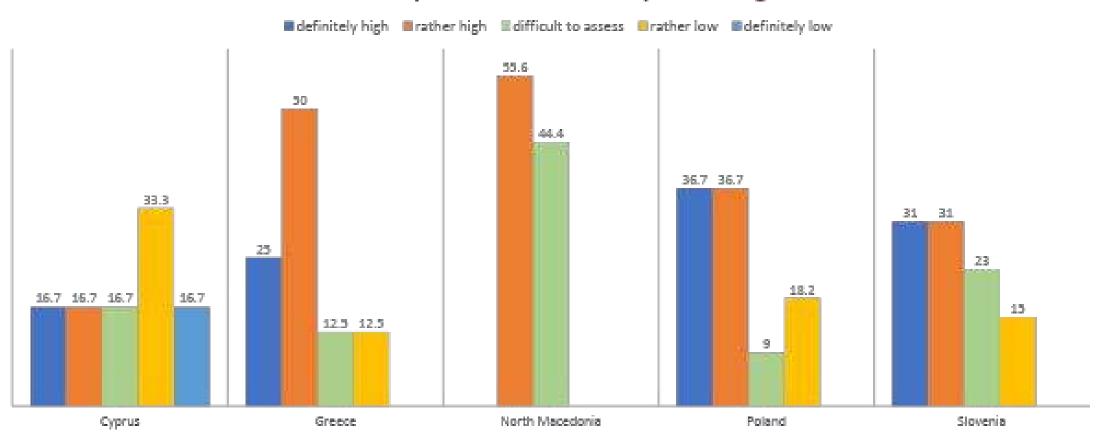




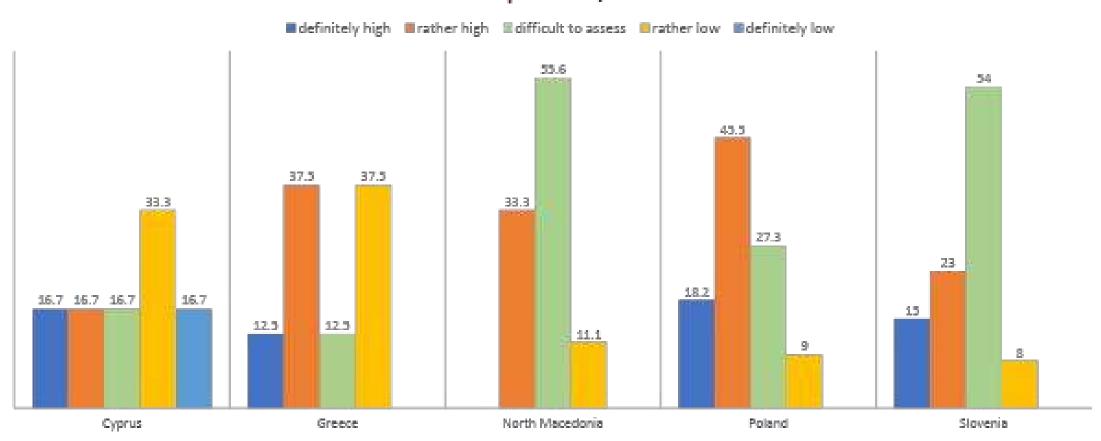
### Methods of waste disposal and processing



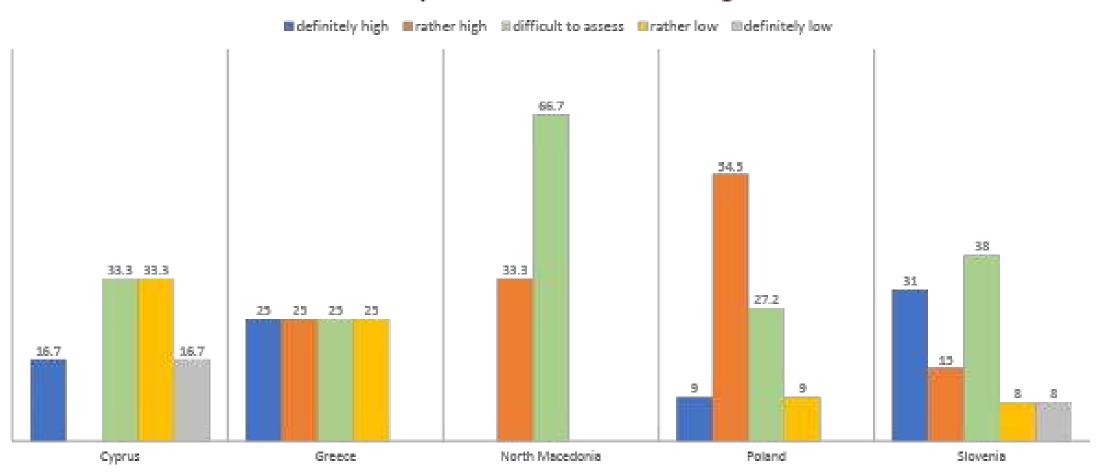
# National legal provisions relating to sustainable waste management in municipalities / cities and processing



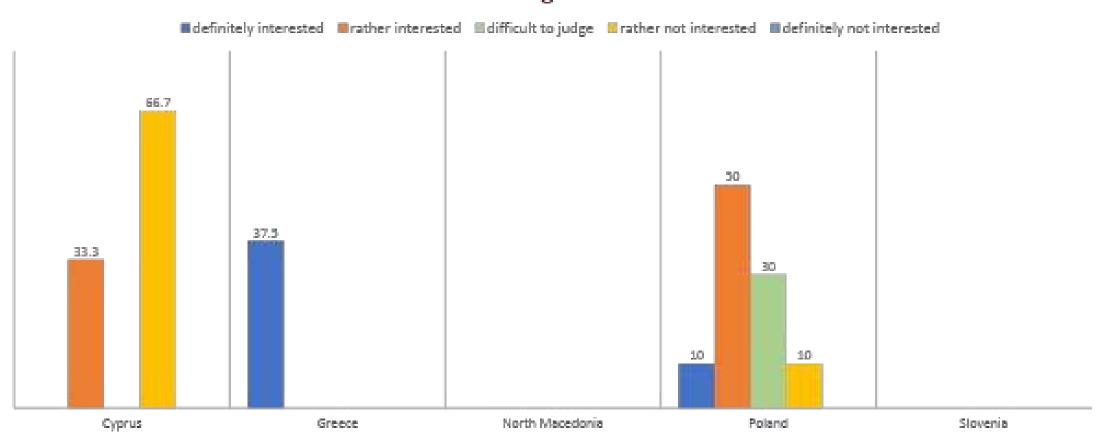
EU legal provisions relating to sustainable waste management in municipalities / cities



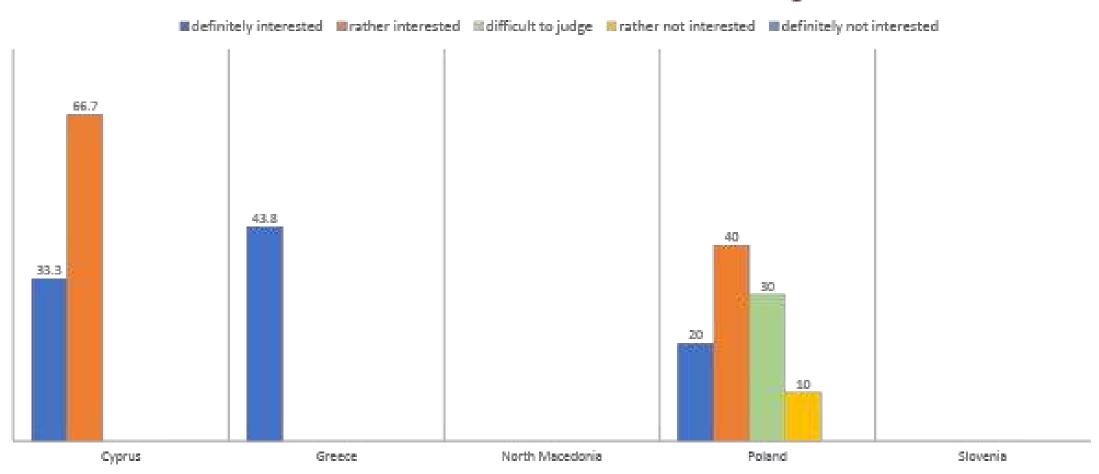
# Profitability of effective waste management



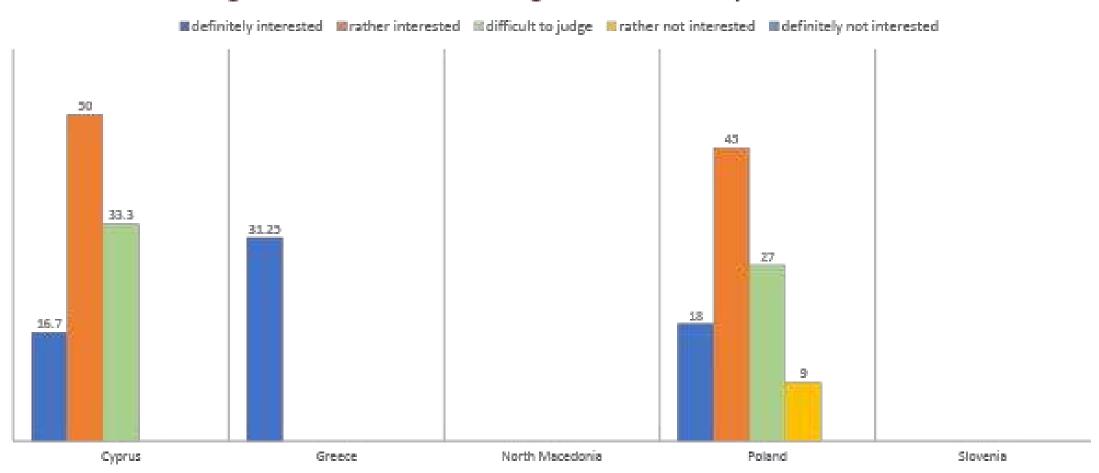
# Coordinating the work of the team in the area of sustainable waste management



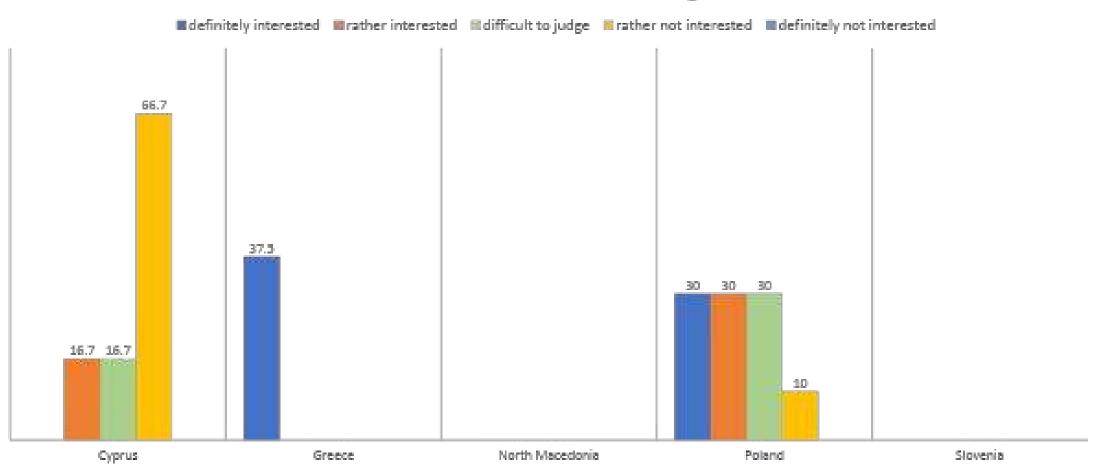
### General information on sustainable waste management



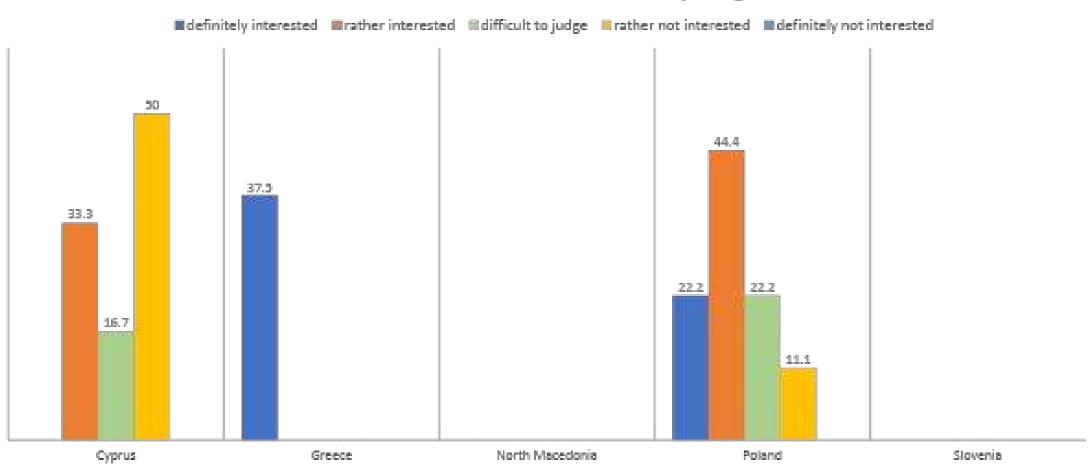
# Organization of waste management in municipalities / cities



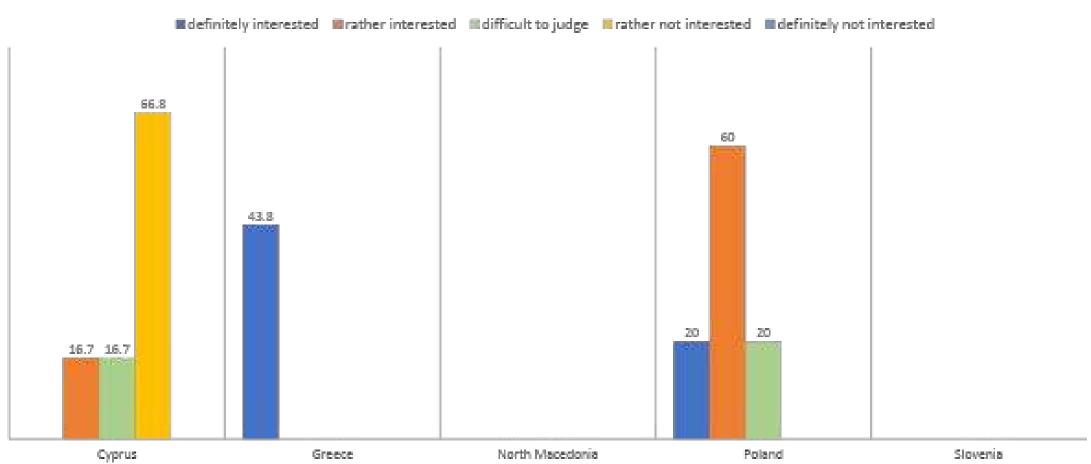
# Documentation of waste management



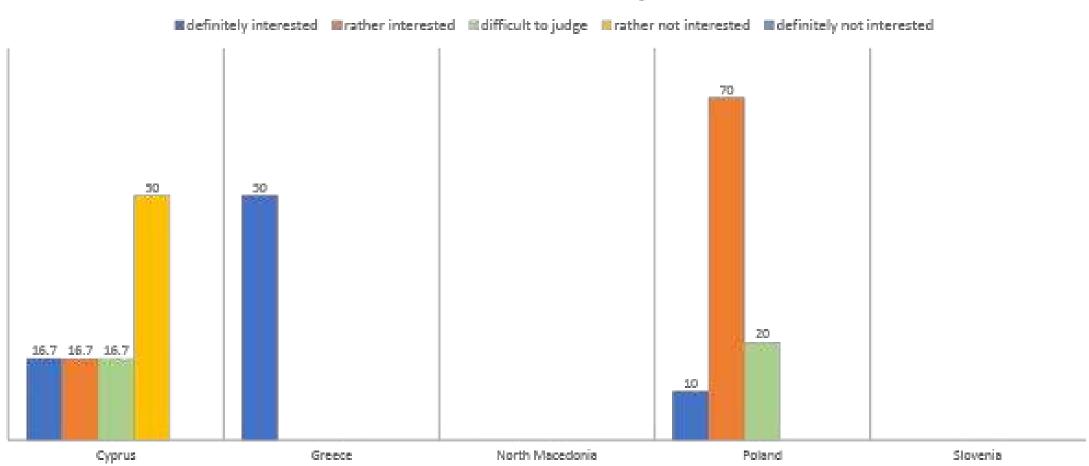
# Waste minimization and recycling



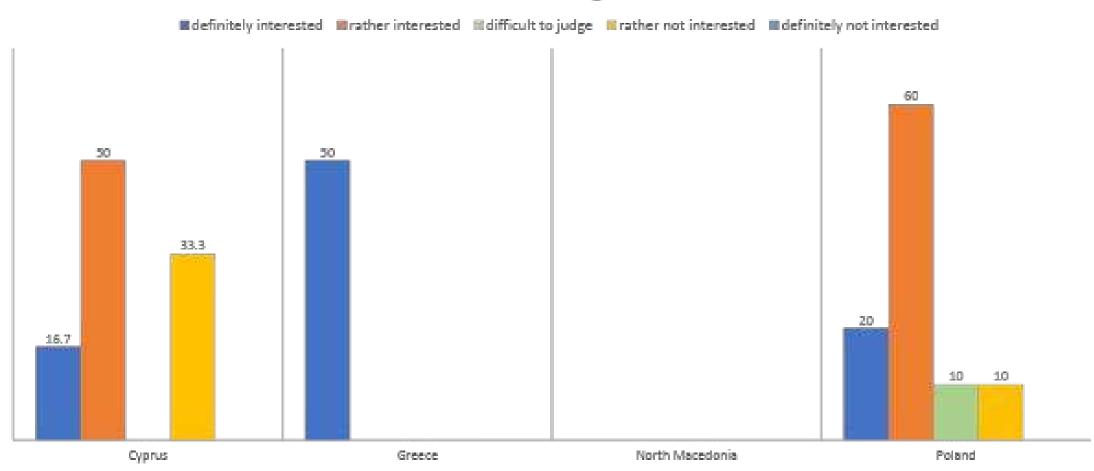
# New recycling technologies



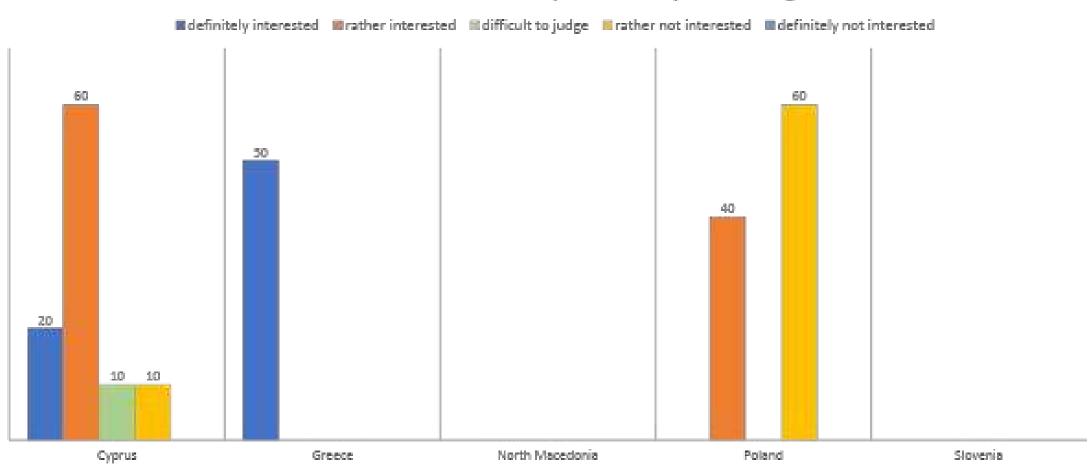
# Circular economy



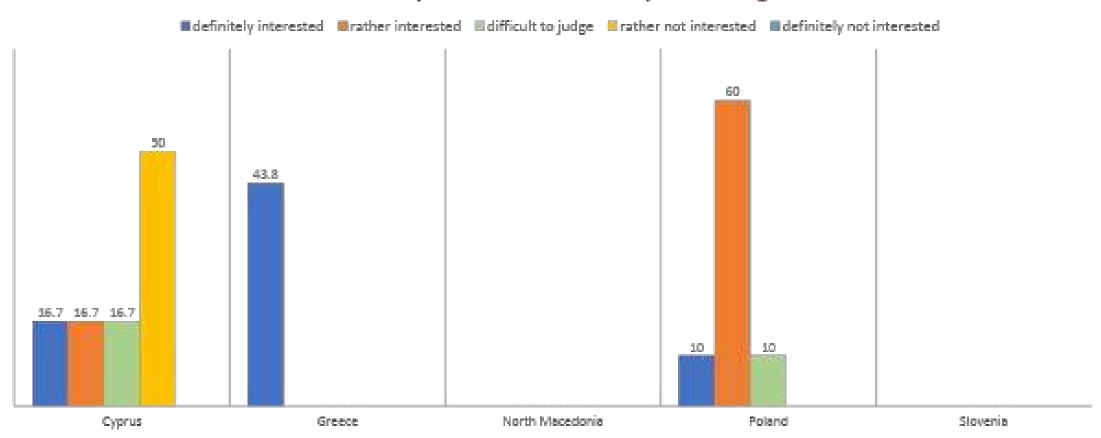
# Sources of waste generation



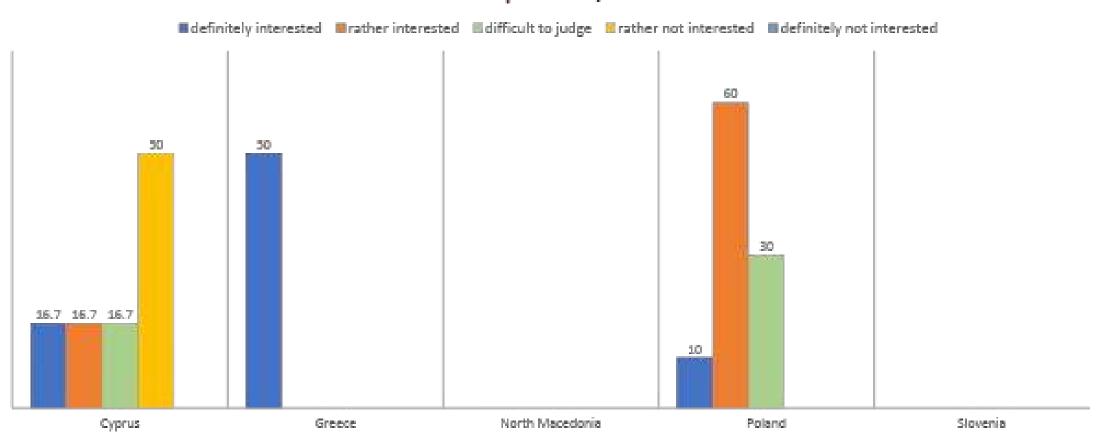
#### Methods of waste disposal and processing



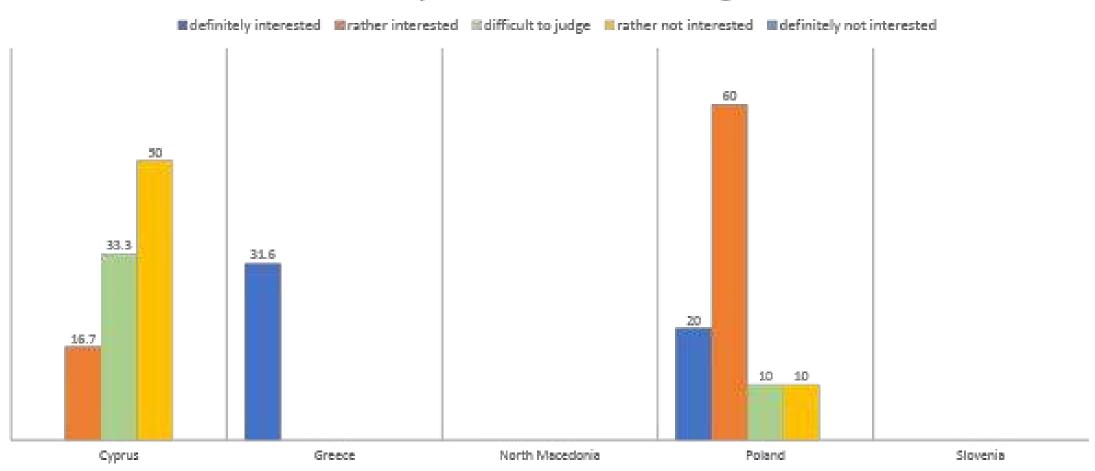
# National legal provisions relating to sustainable waste management in municipalities / cities and processing



### EU legal provisions relating to sustainable waste management in municipalities / cities

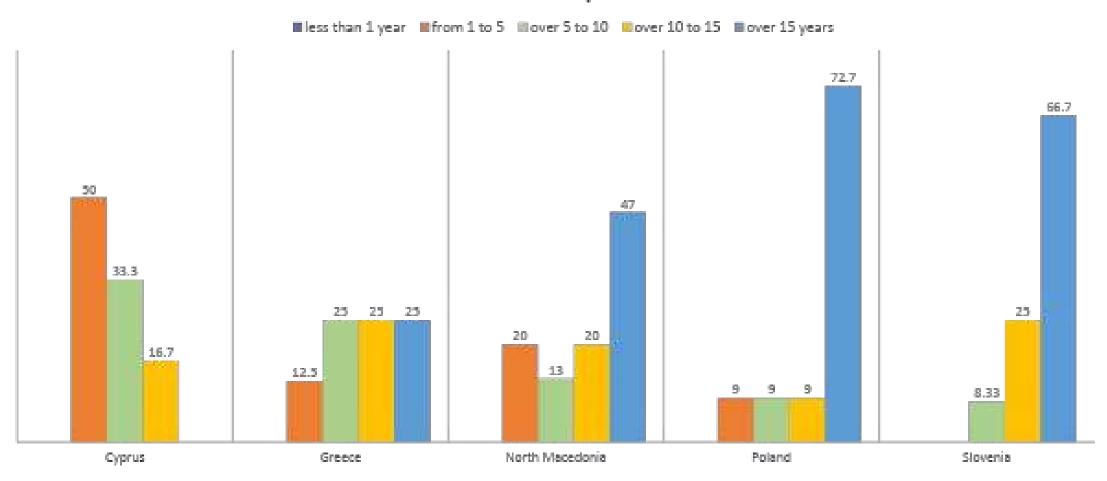


#### Profitability of effective waste management



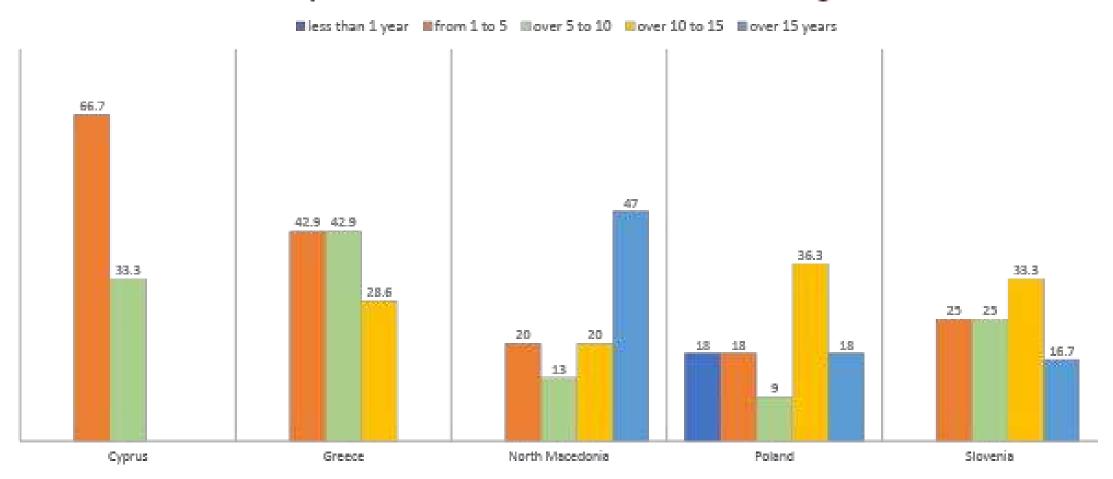
### **MERTICS**

### Total work experience

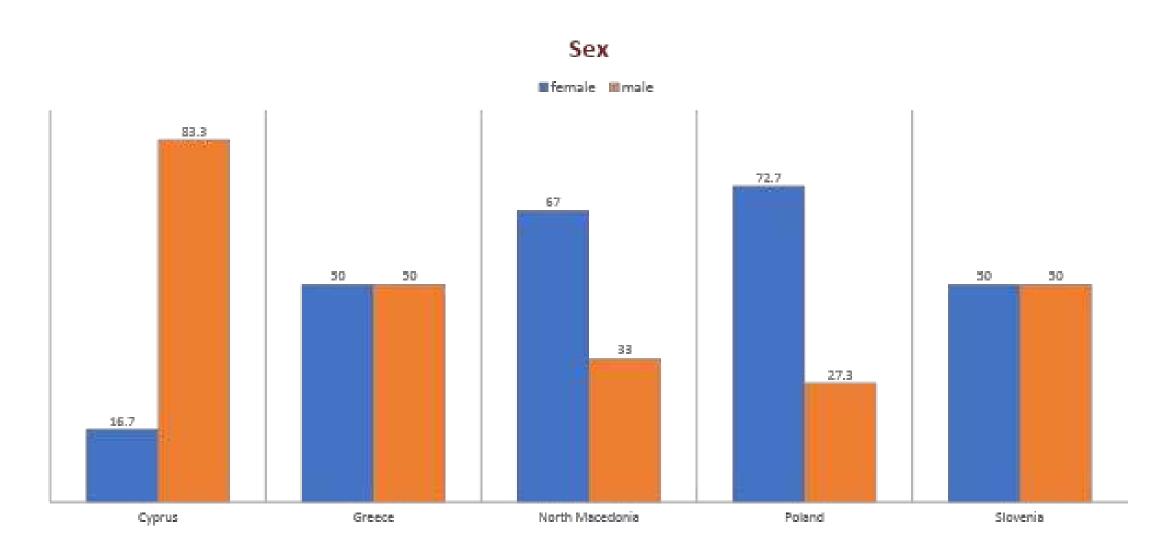


### **MERTICS**

#### Work experience in the field related to waste management



### **MERTICS**







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# Employees of local government units

Comparison of selected issues from the survey





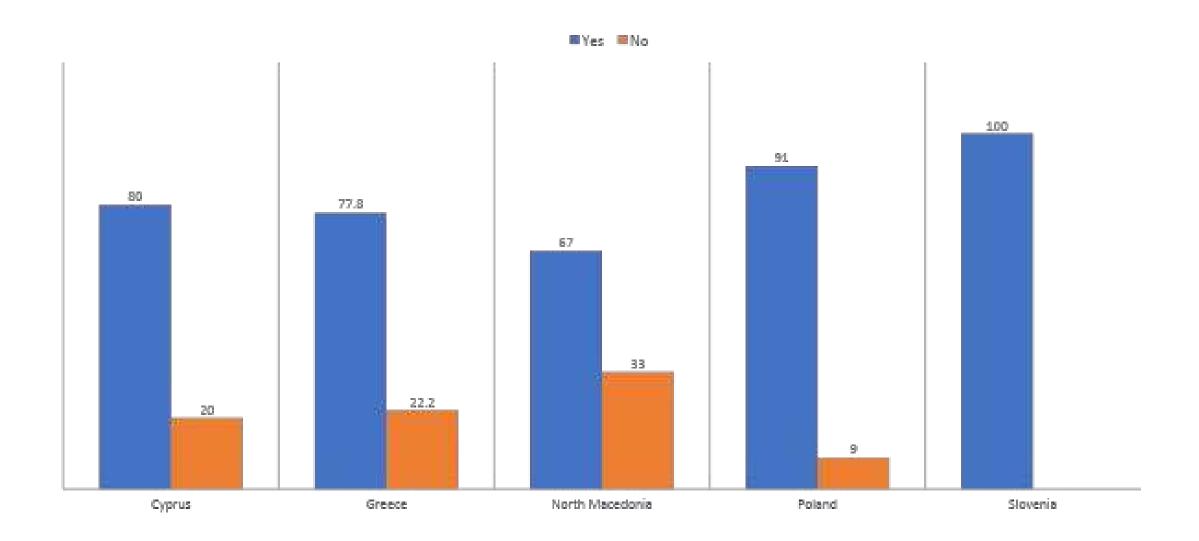




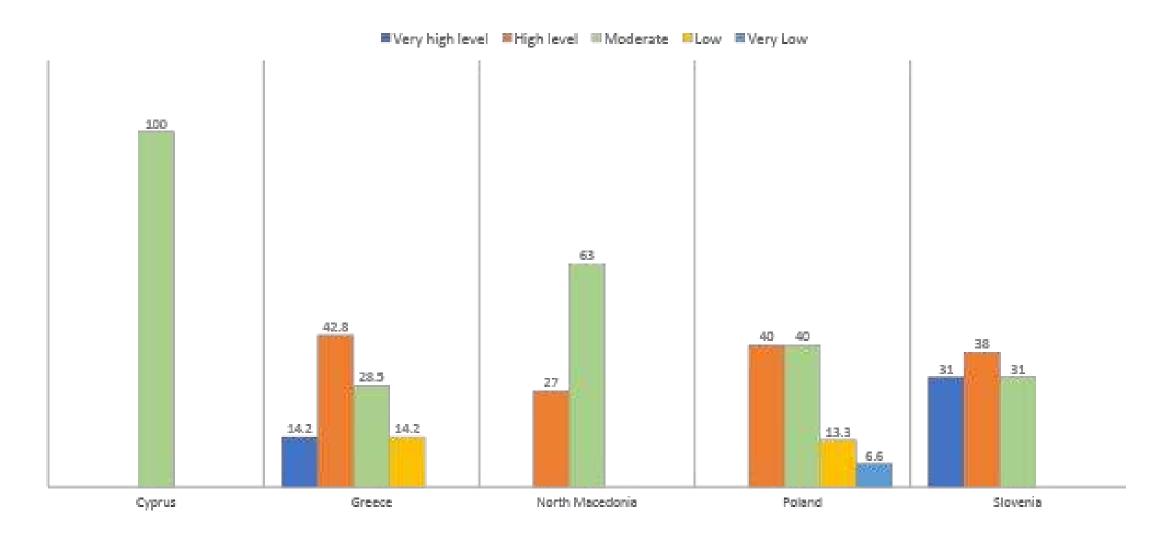




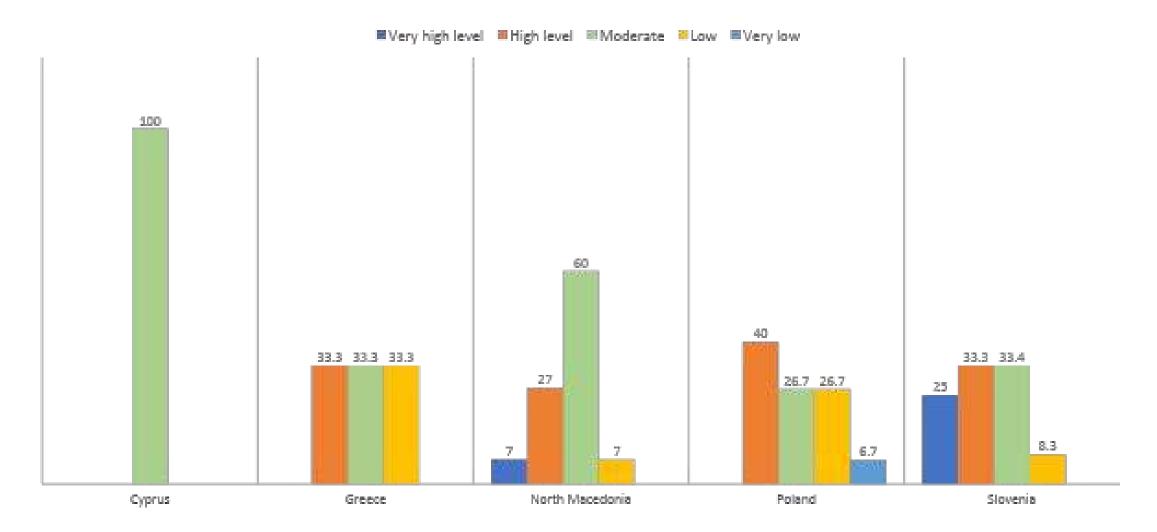
### 1. Do you perform tasks related to sustainable waste management in your work?



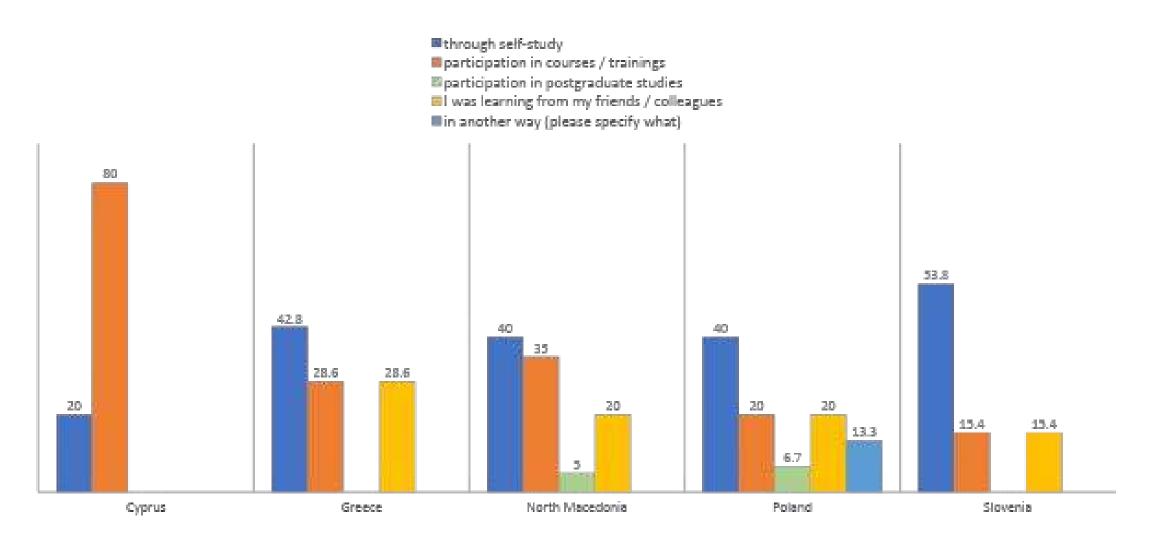
# 2. Please, give a general assessment of your KNOWLEDGE level regarding sustainable waste management in municipalities/city?



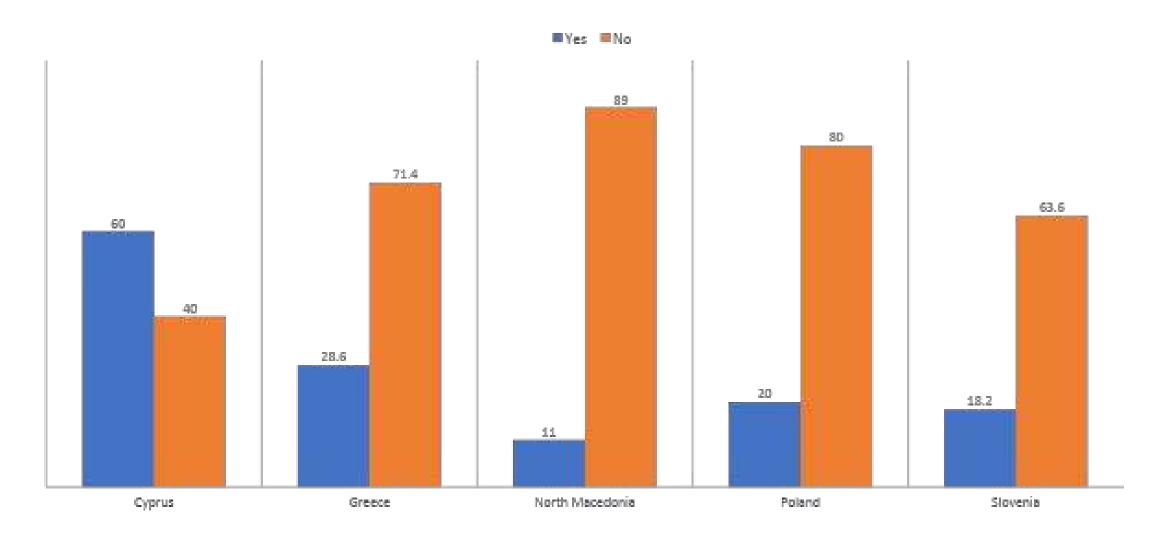
3. Please provide a general assessment of your SKILLS regarding sustainable waste management in municipalities / city?



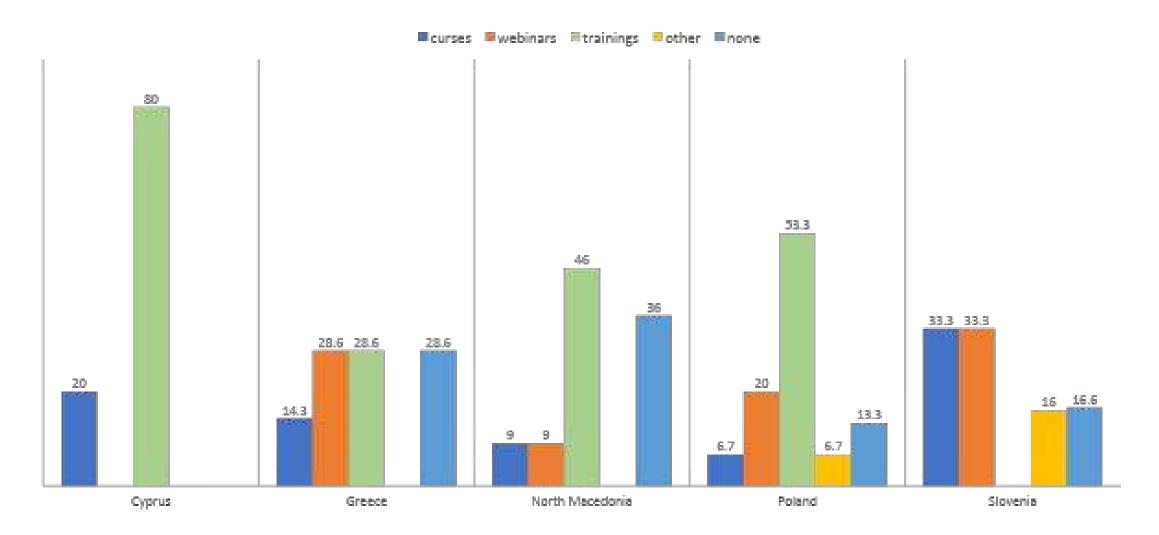
# 4. What was the main way you acquired KNOWLEDGE and SKILLS in the field of sustainable waste management in municipalities/city?



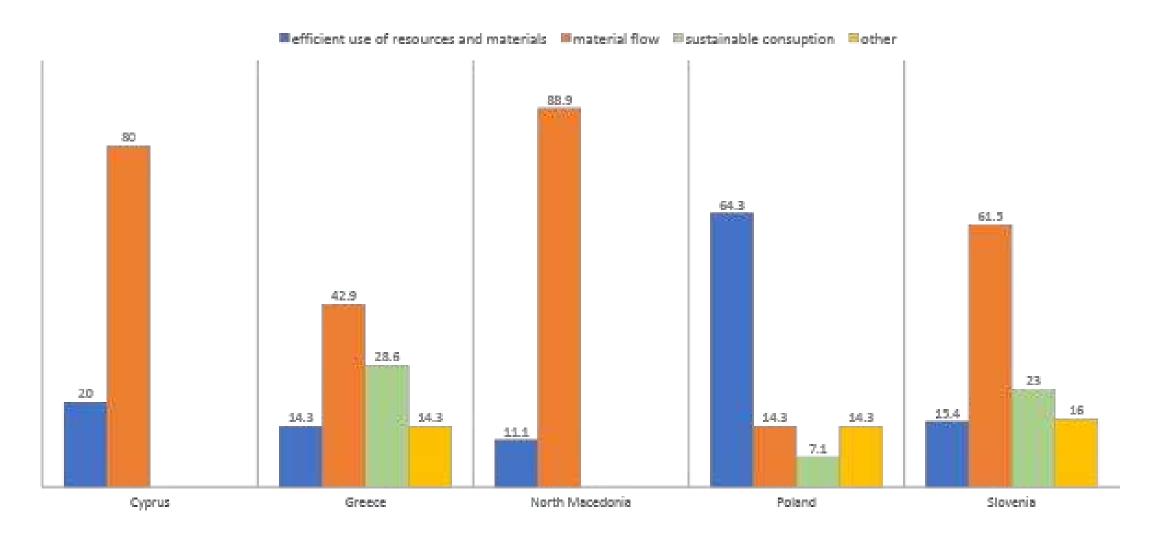
5. Were you trained in sustainable waste management by your organization before you were employed in this department?



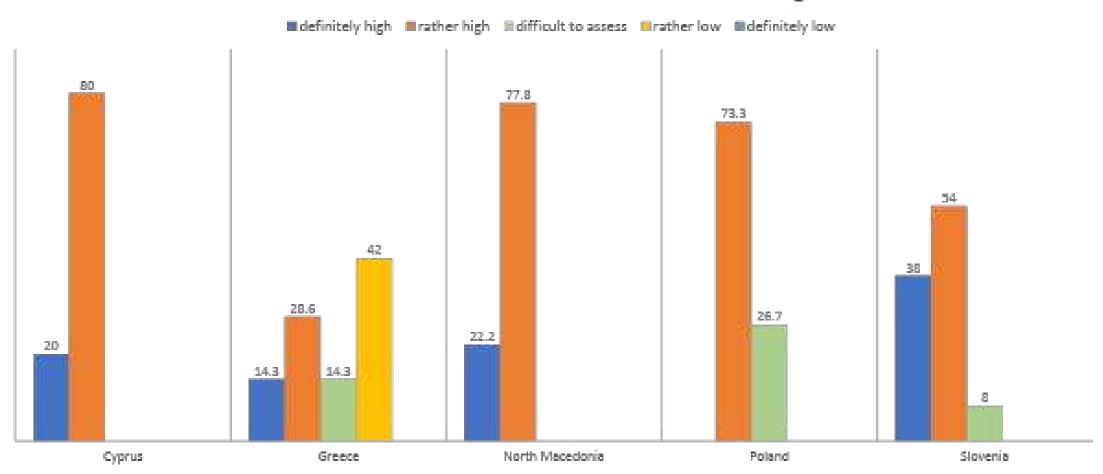
6. Which type of training in the field of sustainable waste management sector have you participated in the last 3 years?



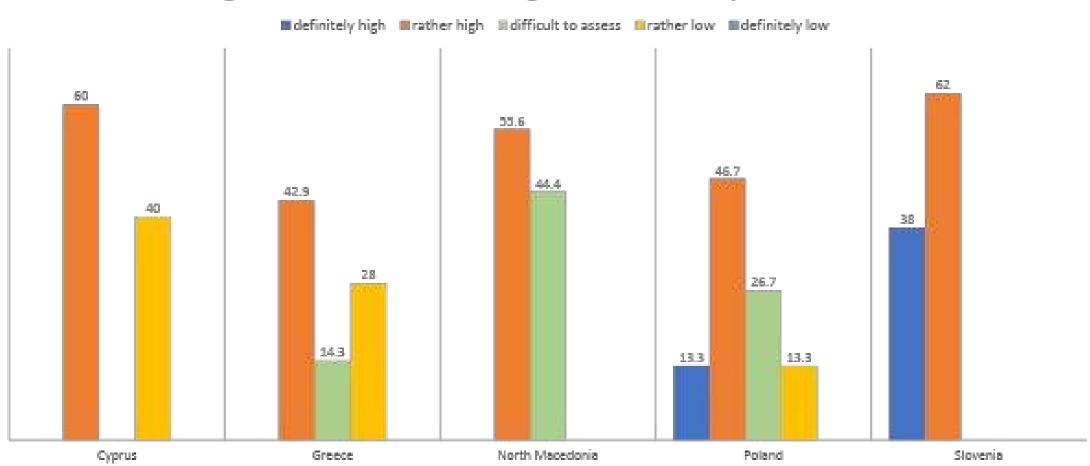
# 6. How the circular economy is integrated into environmental awareness policy in your company?



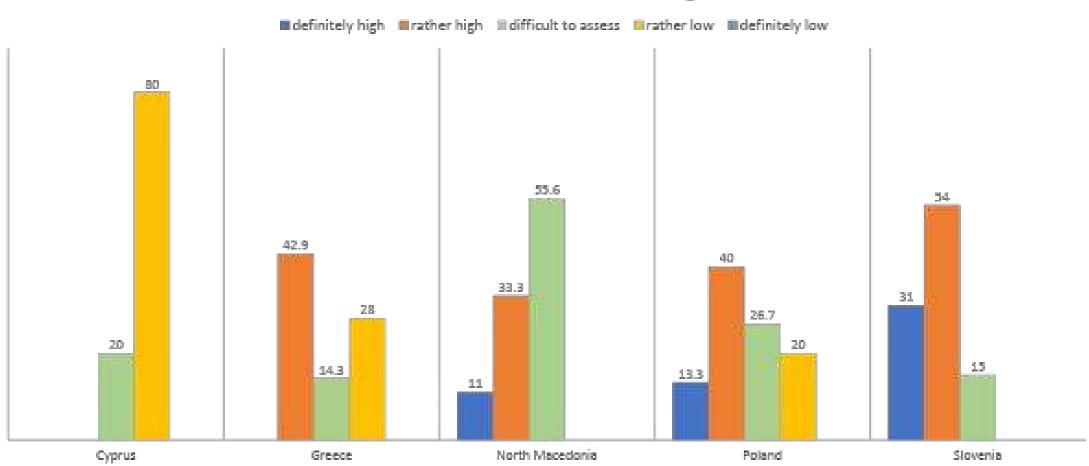
#### General information on sustainable waste management



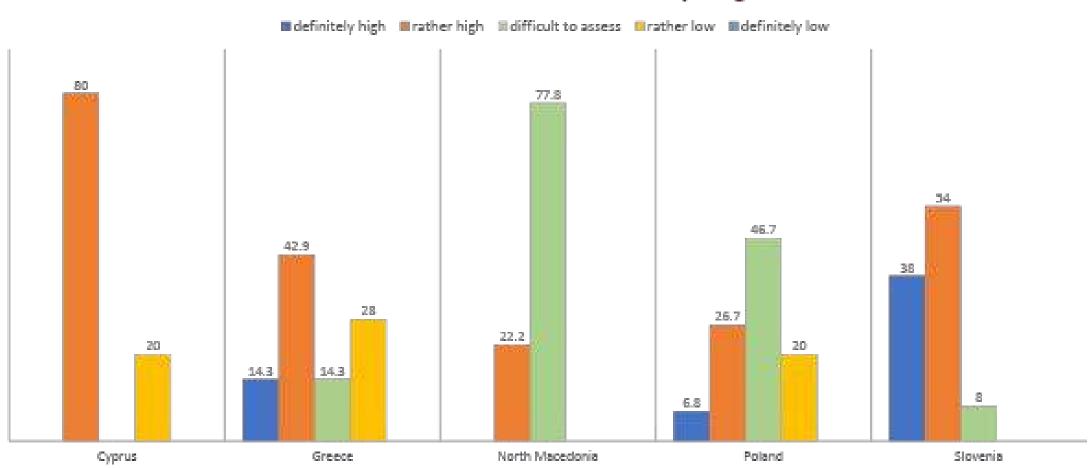
#### Organization of waste management in municipalities / cities



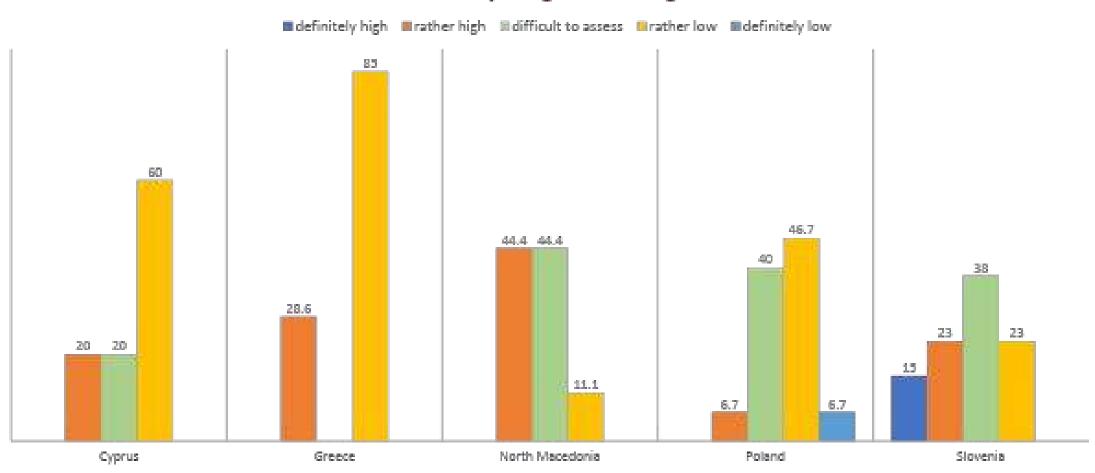
#### Documentation of waste management



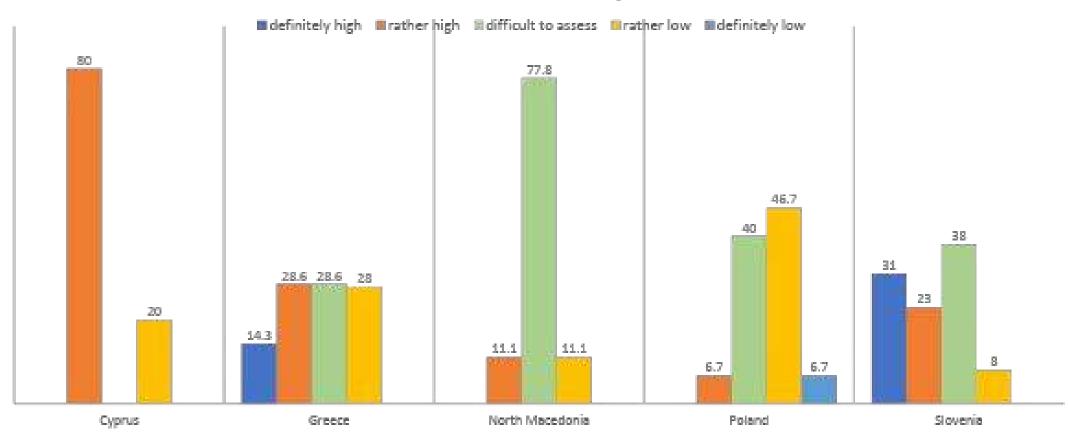
#### Waste minimization and recycling



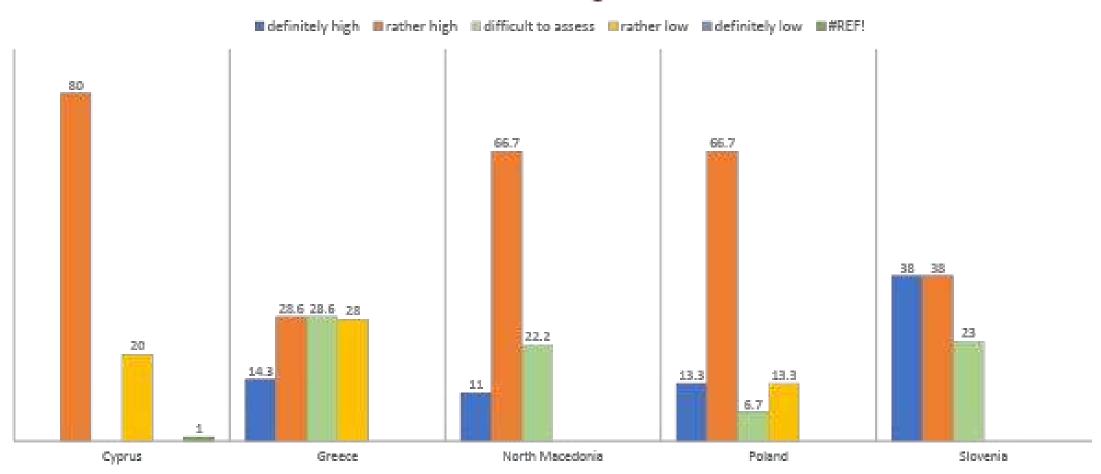
#### New recycling technologies



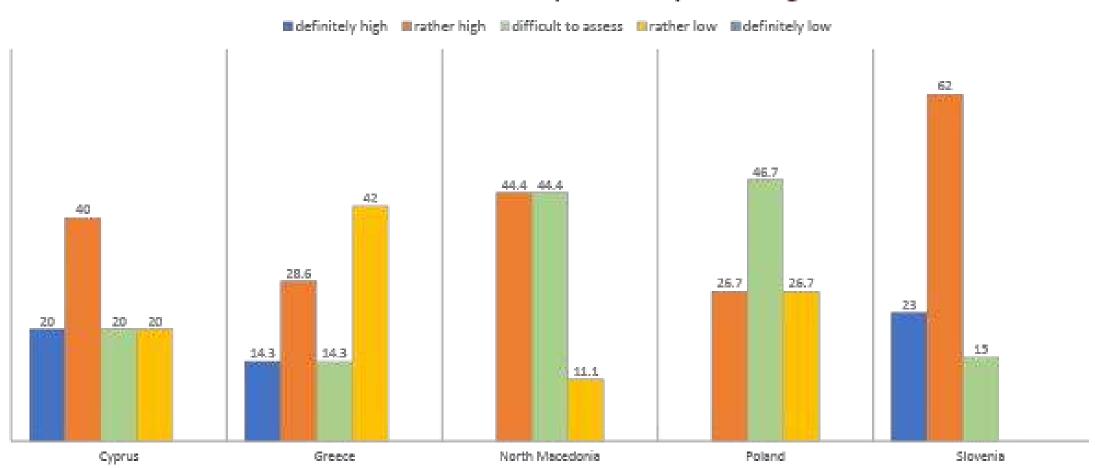
#### Circular economy



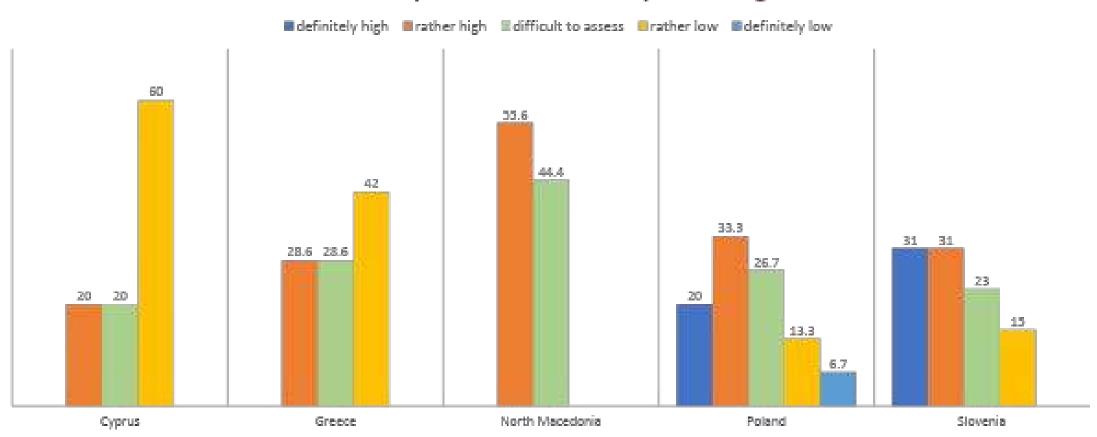
#### Sources of waste generation



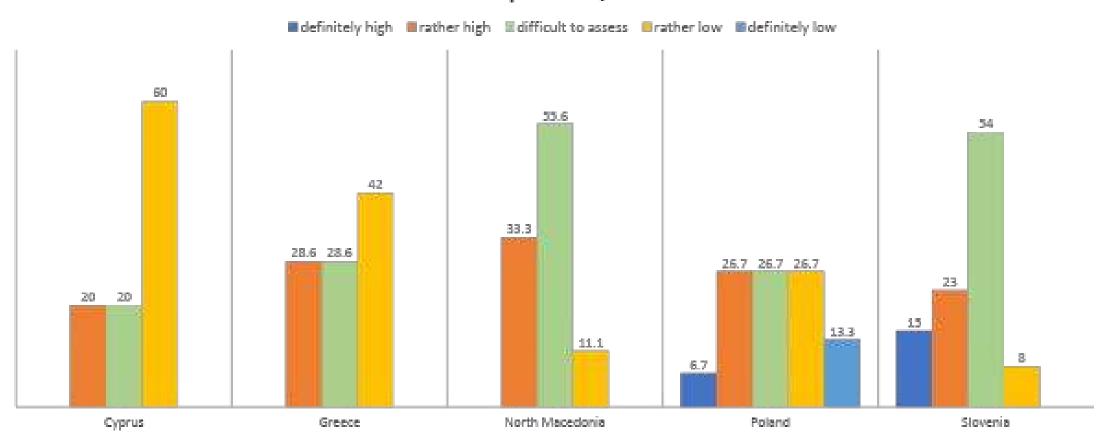
#### Methods of waste disposal and processing



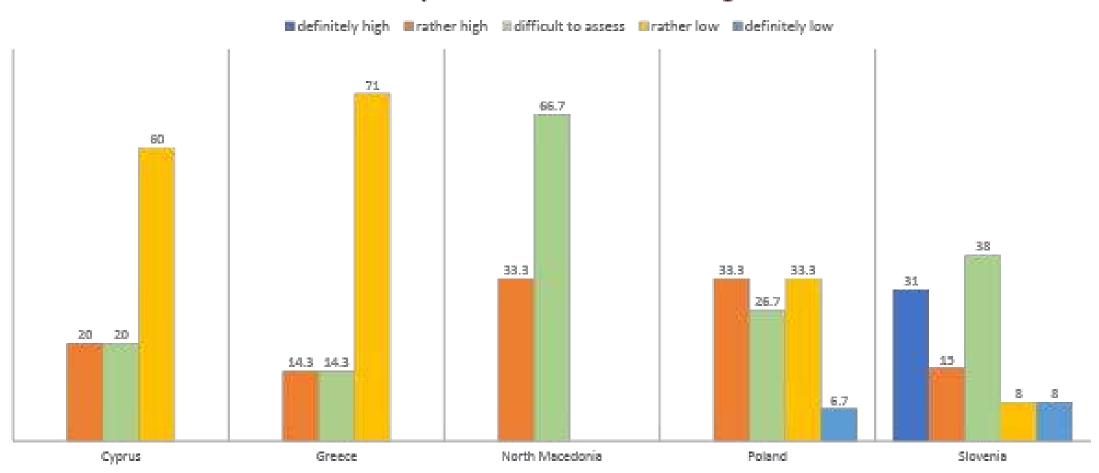
# National legal provisions relating to sustainable waste management in municipalities / cities and processing



EU legal provisions relating to sustainable waste management in municipalities / cities

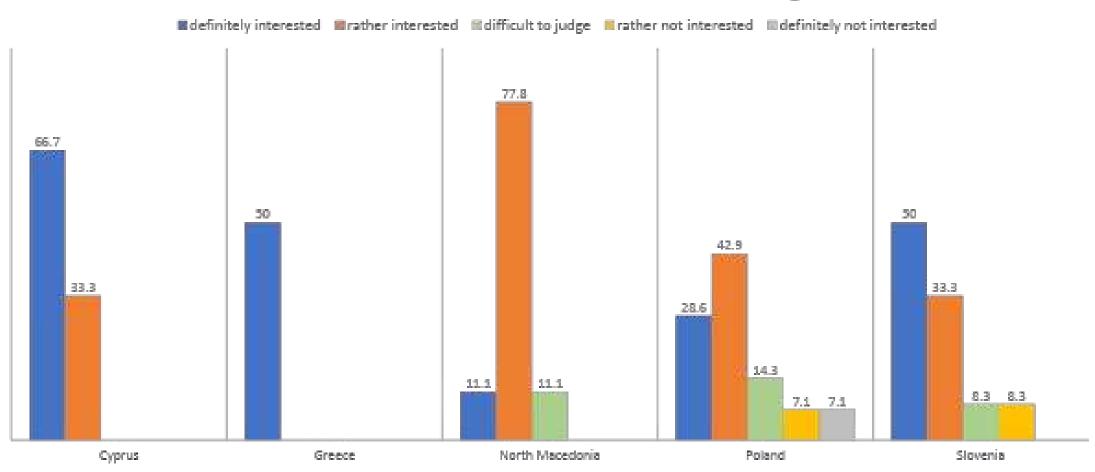


#### Profitability of effective waste management

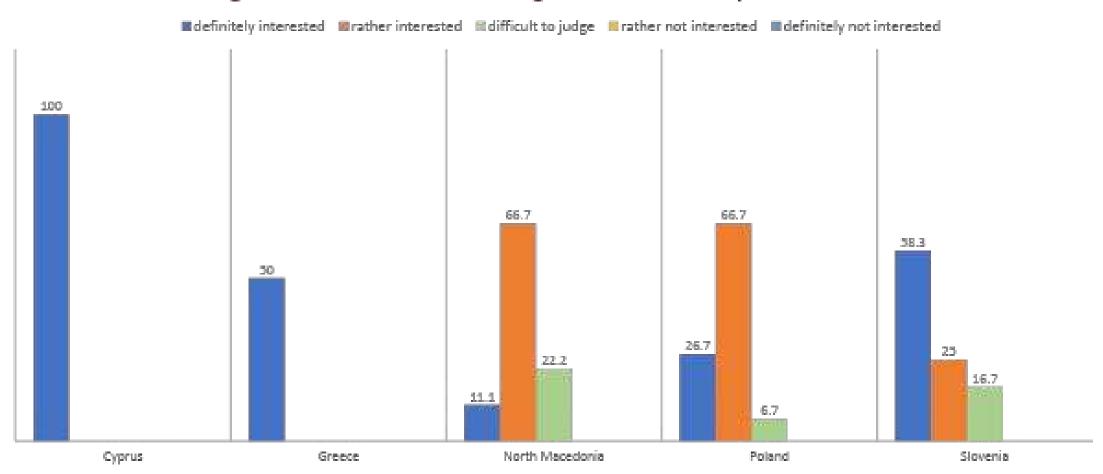


9. Please indicate the subject of professional development in the area of sustainable waste management in municipalities / city that you would be of particular interest to you?

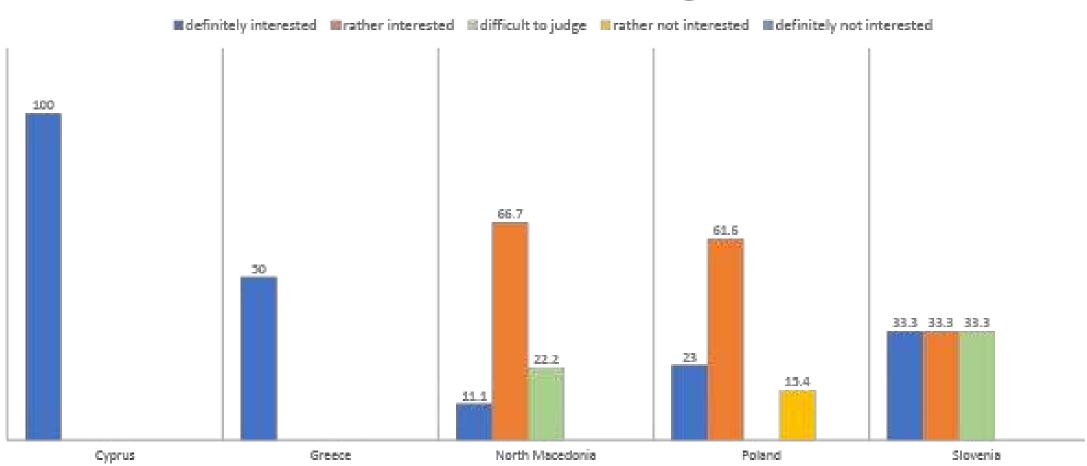
#### General information on sustainable waste management



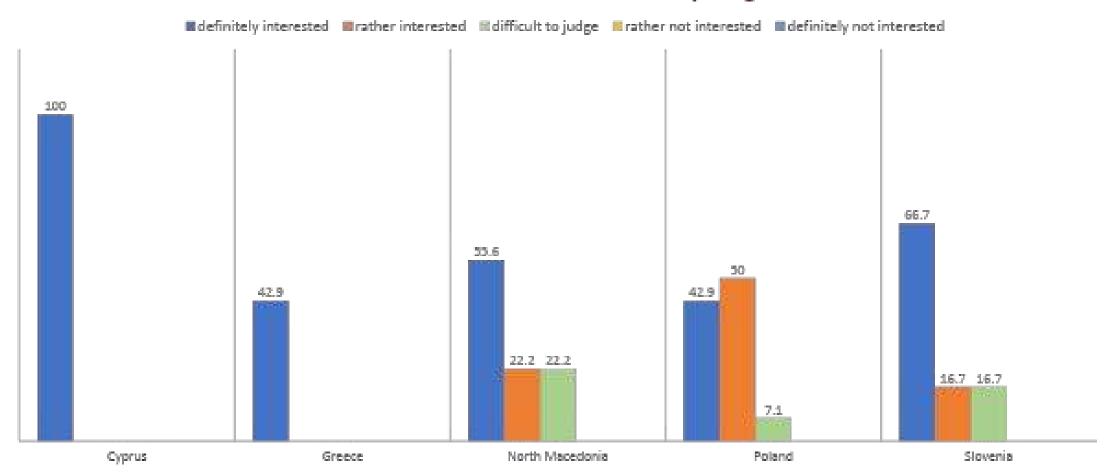
#### Organization of waste management in municipalities / cities



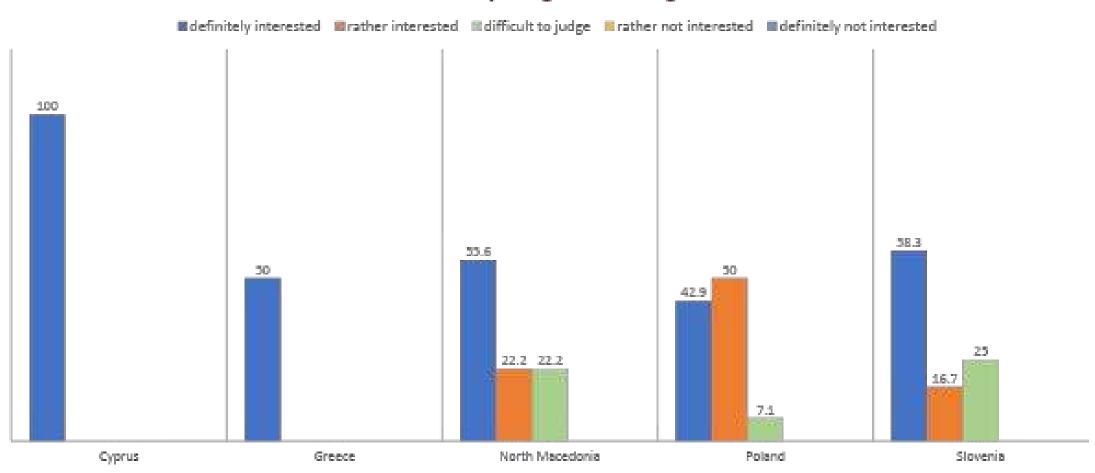
#### Documentation of waste management



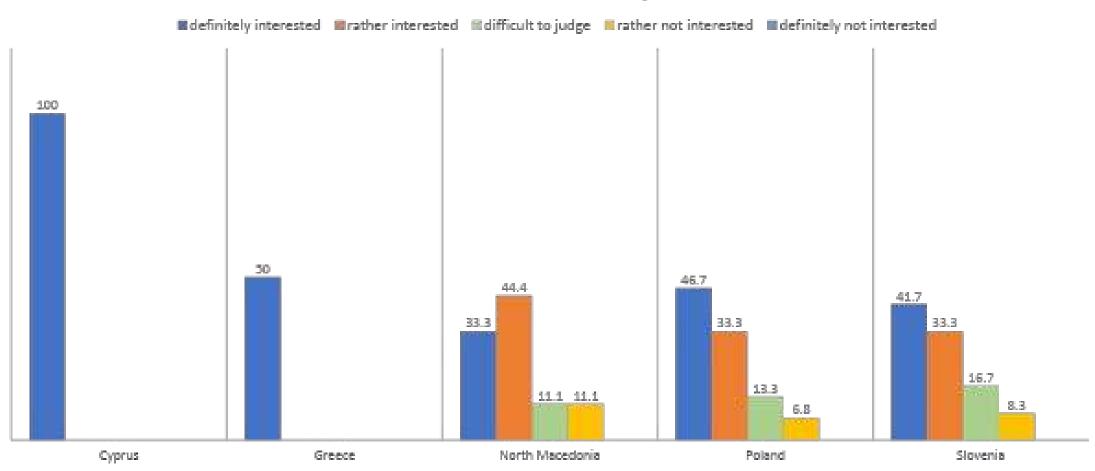
#### Waste minimization and recycling



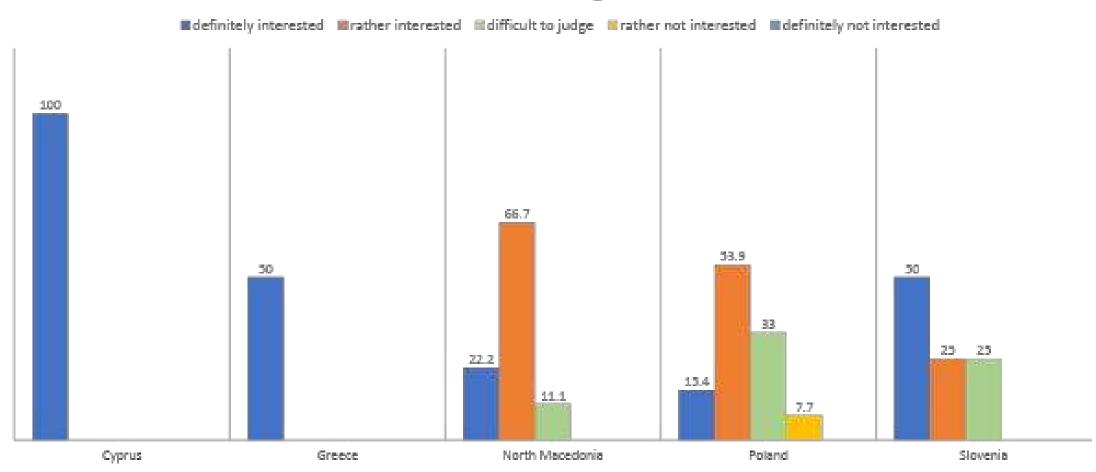
#### New recycling technologies



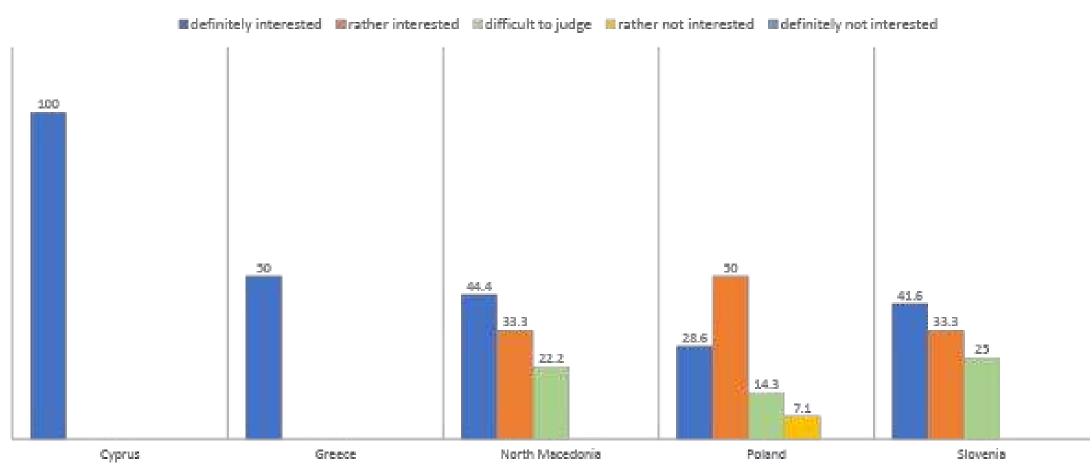
#### Circular economy



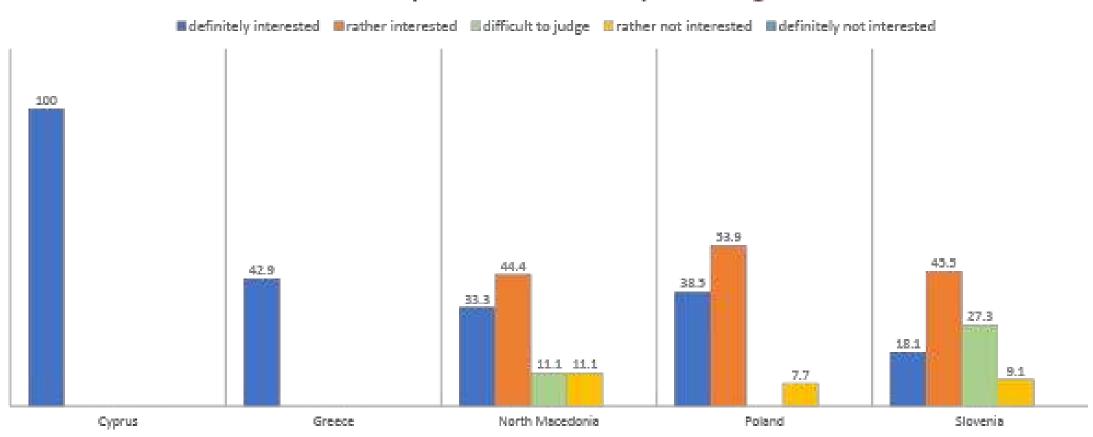
#### Sources of waste generation



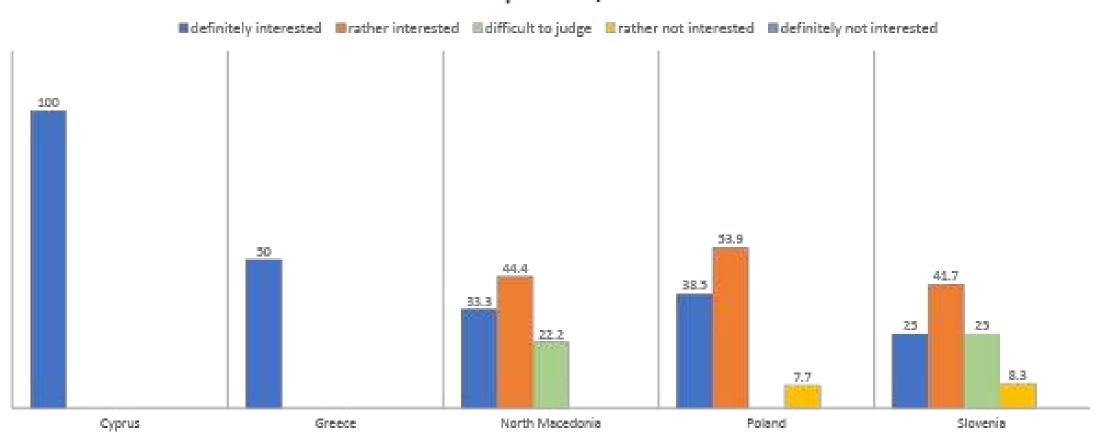
#### Methods of waste disposal and processing



# National legal provisions relating to sustainable waste management in municipalities / cities and processing

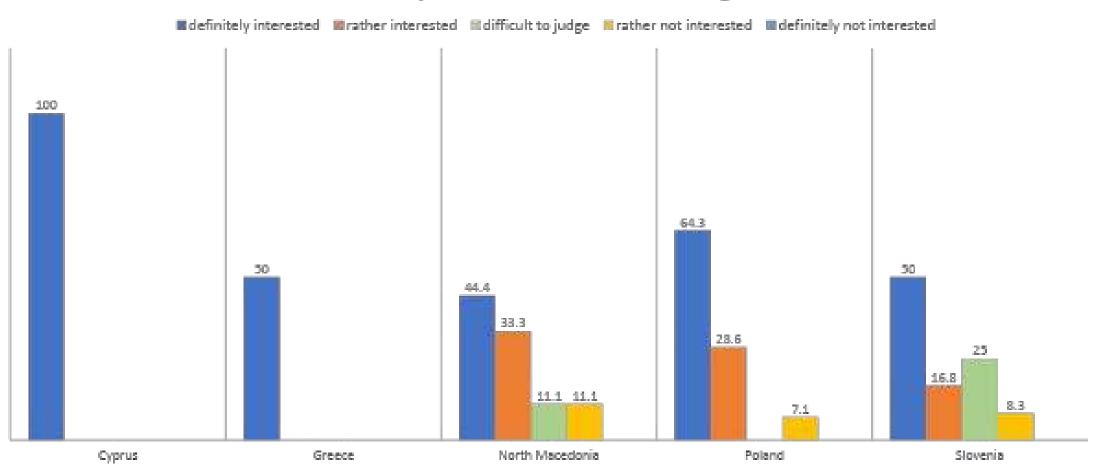


# EU legal provisions relating to sustainable waste management in municipalities / cities



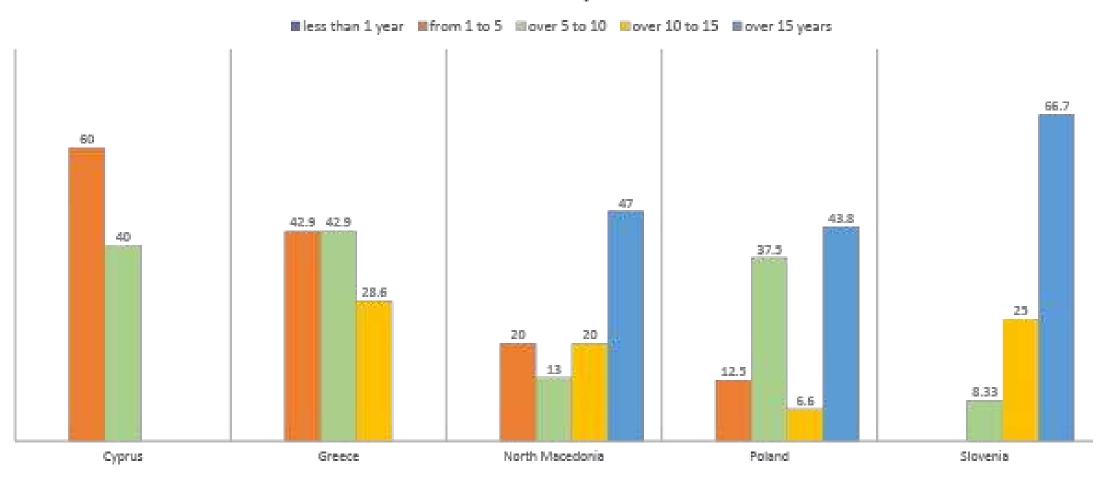
9. Please indicate the subject of professional development in the area of sustainable waste management in municipalities / city that you would provide to employees?

# Profitability of effective waste management



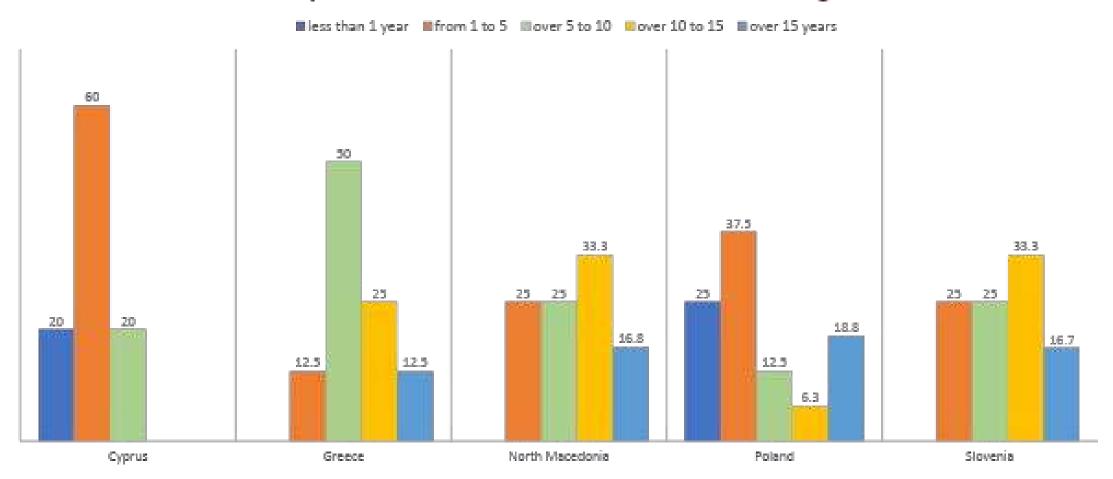
# **MERTICS**

# Total work experience

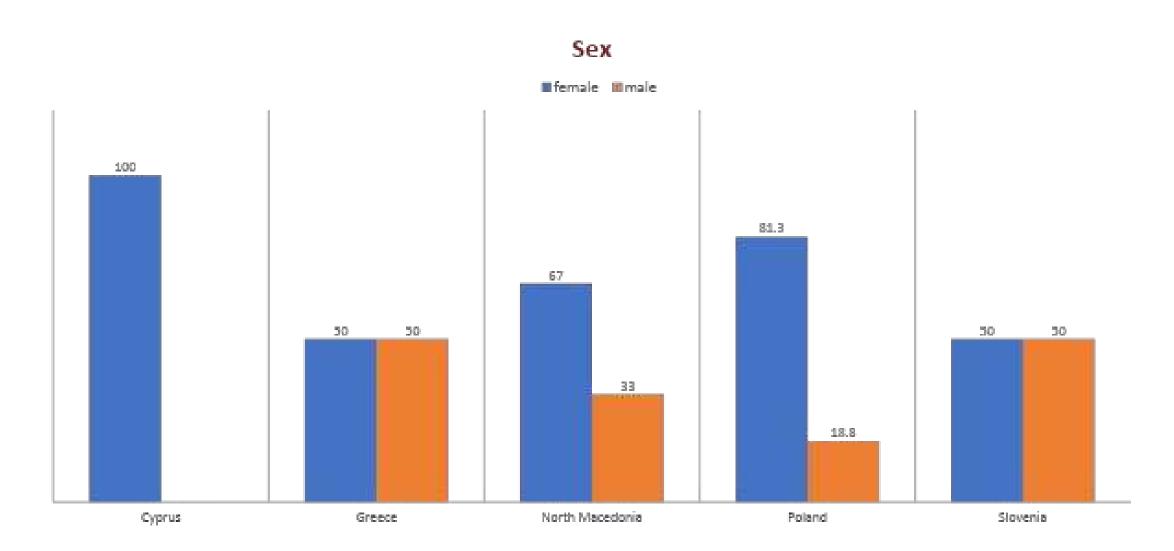


# **MERTICS**

# Work experience in the field related to waste management



# **MERTICS**







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# Students, teachers and management of vocational schools

Comparison of selected issues from the survey





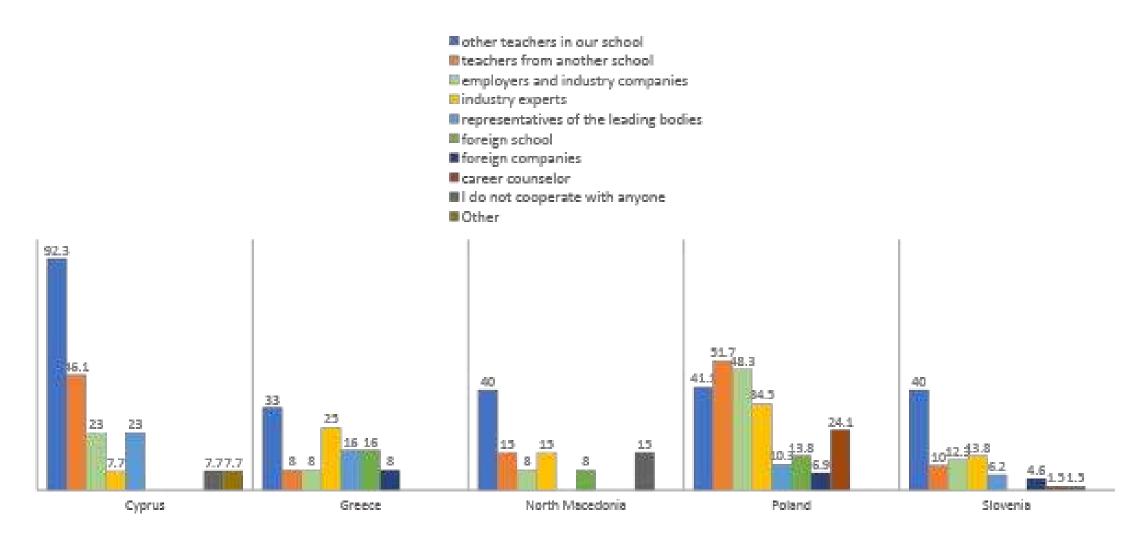




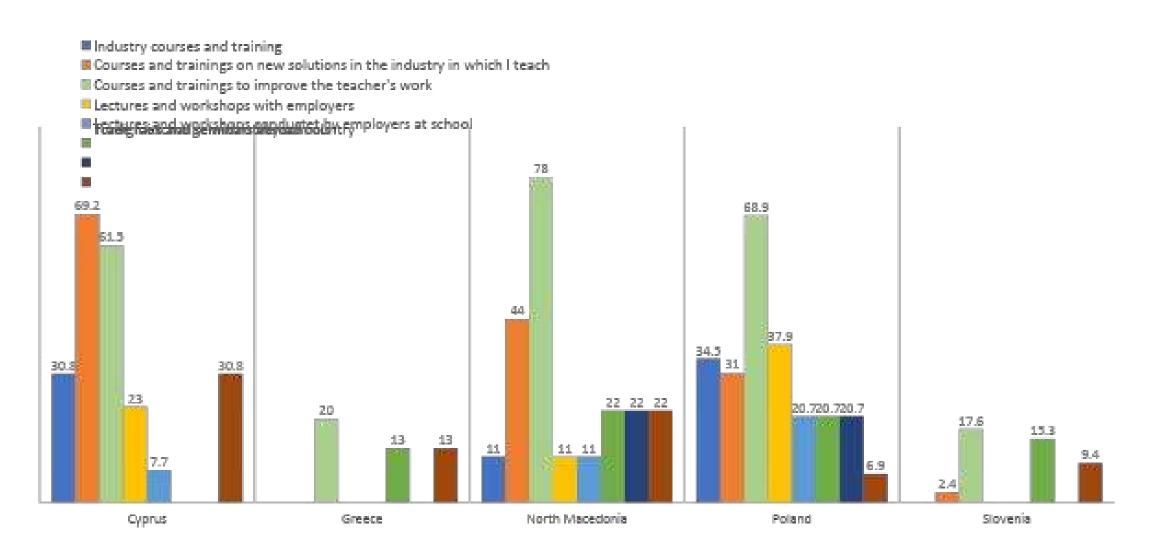




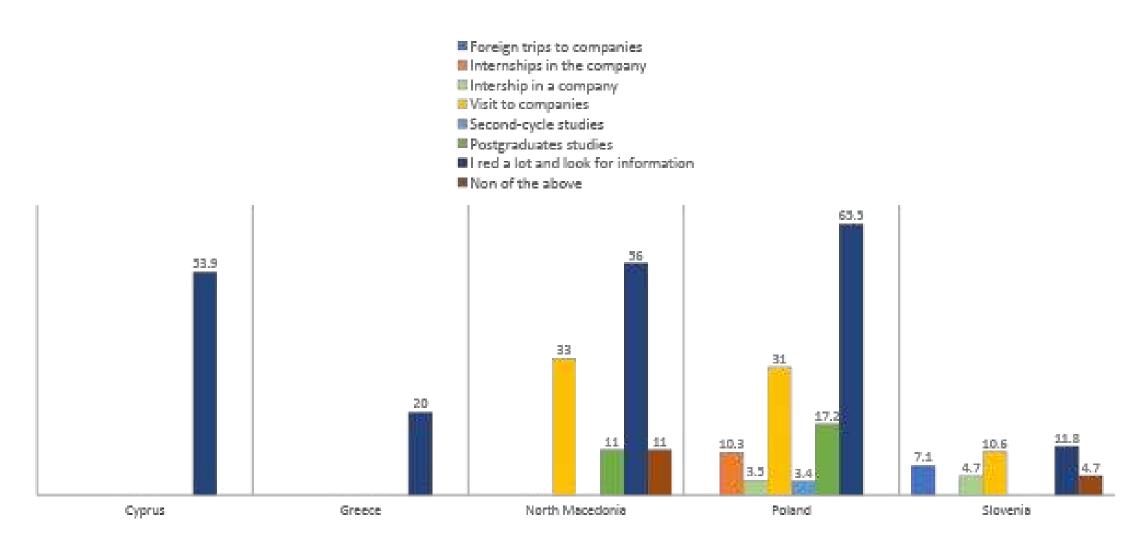
# 1. With whom do you cooperate within the taught subject in order to exchange experiences?



# 2a. What forms of direct professional development have you used in the last 3 years?



# 2b. With whom do you cooperate within the taught subject in order to exchange experiences?



# 3. What scope of industry training would be of interest to you?

#### Cyprus

- Waste management
- Circular Economy
- Recycling
- environmental management, innovation
- Environment, innovation

#### Greece

- Circular Economy and Sustainable Development"
- •"NEW TECHNOLOGIES IN WASTE MANAGEMENT"
- "Sustainability of the environment"
- COMMUNICATION SKILLS
- UPDATING ON EUROPEAN AND GREEK LEGISLATION
- MANAGEMENT

#### North Meceodnia

- Zero waste concept
- Circular economy
- Recycling and reuse of waste
- Raising awareness through sustainable development.

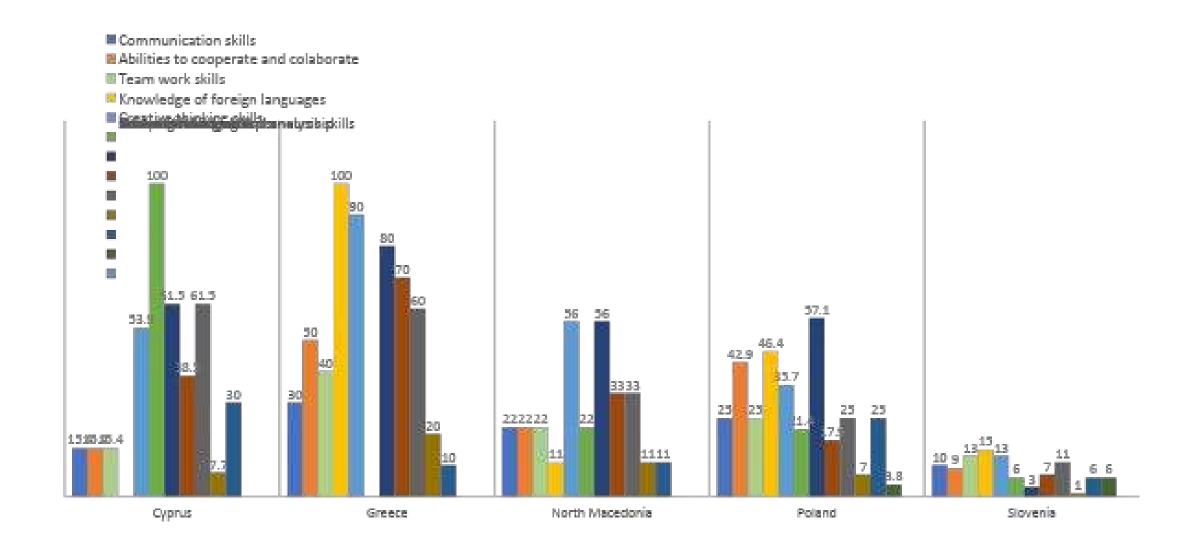
#### Poland

- General knowledge about environment, waste management, recycling
- Experience in waste management
- Knowledge of legislation
- Related degree

#### Slovenia

 Training on waste, circular economy, and recycling of hazardous waste.

# 4. What personal skills / soft skills would you like to develop?



# 5. What other, specific trainings related to the subject you teach, would you like to undergo?

#### Cyprus

- Legislation related to the environment
- Environmental issues, How to manage solids and others of waste
- Recycling
- Waste Management Methods
- Ways of waste management
- Waste management
- Proper waste management
- Environment and its conservation
- Education related to the environment and our health
- I am a special education teacher, I would be interested in sign language or even Braille writing and reading

#### Greece

- Training in available software tools on circular economy
- Environmental footprint and climate change
- Circular economy
- Modern technologies

#### North Meceodnia

- Training in the field of waste management
- Examples of good practices
- The carbon footprint of waste packaging
- Circular economy in waste management
- Training in the field of foreign languages
- Learning through observation, research, acquisition of permanent and enforceable knowledge in the field of sustainable waste management
- Training in the field of new materials and technological procedures related to them

#### Poland

 Modern technologies in environmental protection
 Modern methods and technologies used in water treatment
 Environmental resource management.
 Hotel industry and tourism
 Seminars on new solutions in forestry, the latest research results in the field of forest sciences

#### Slovenia

- Training in the field of waste management
- Examples of good practices
- The carbon footprint of waste packaging
- Circular economy in waste management
- Training in the field of foreign languages
- Computer programs (such as: Geogebra),
- Training in the field of new materials and technological procedures related to them

6. Are there any professional qualifications that you, as a teacher, would like to obtain, which would improve your professional qualifications?

### Cyprus

• Digital skills (11%)

### Greece

- Training in available software tools on circular economy
- Environmental footprint and climate change
- Circular economy
- Modern technologies

### North Meceodnia

More
 management
 skills for
 working with
 students

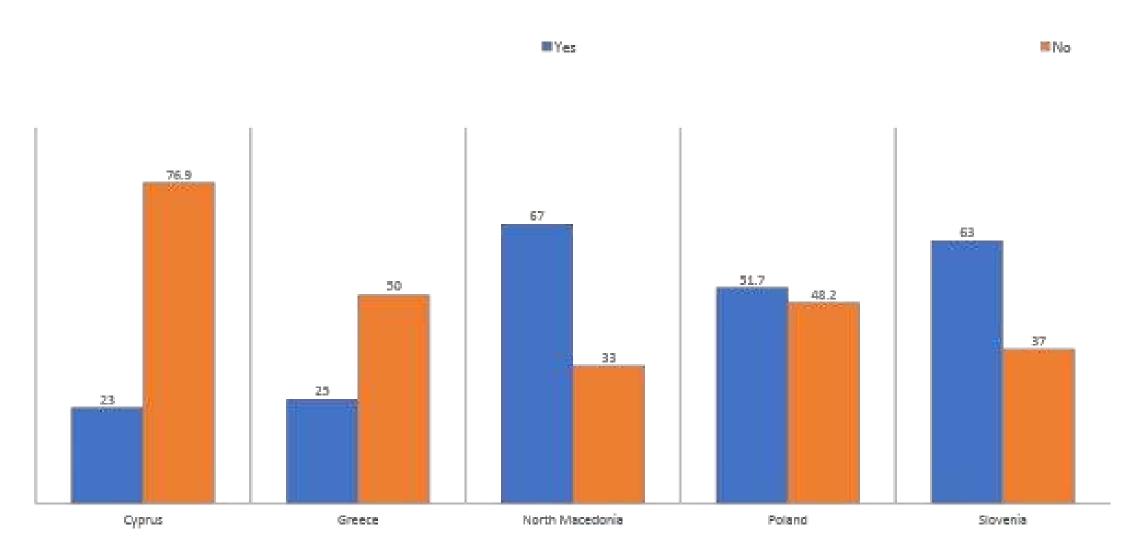
### Poland

• No

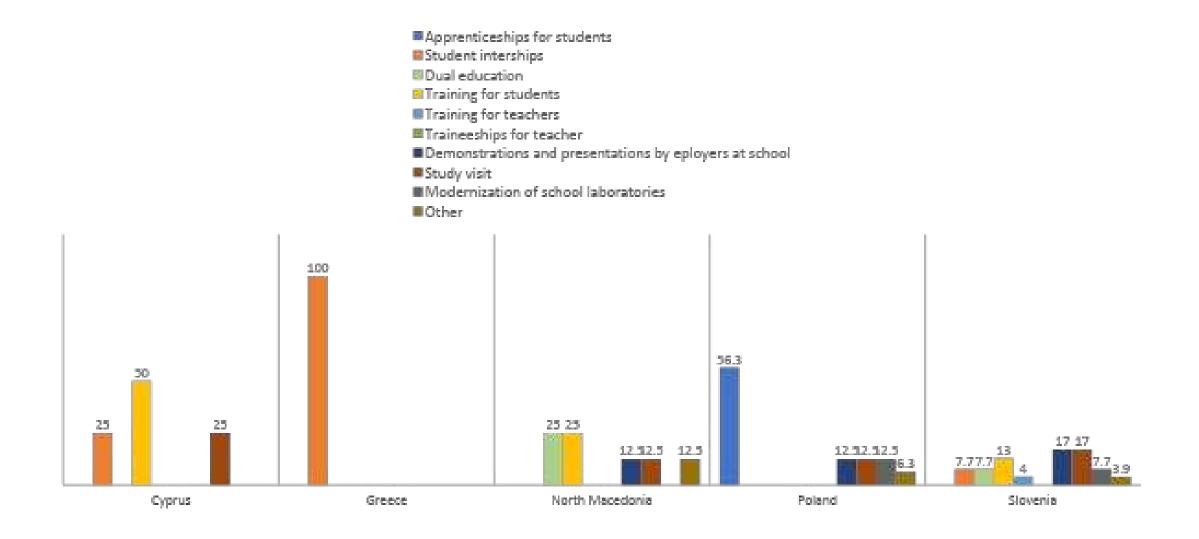
### Slovenia

Computer skills

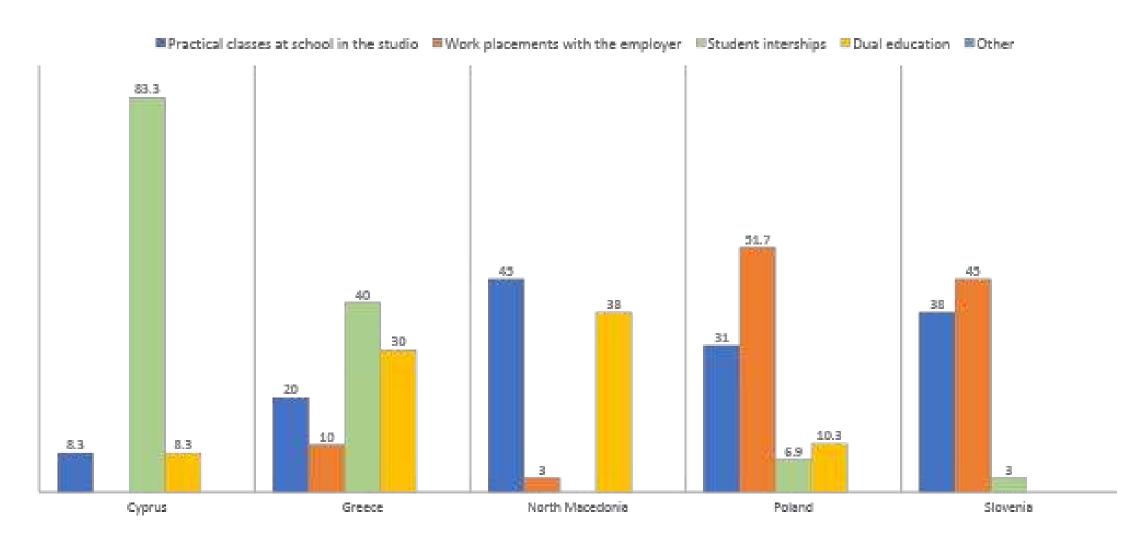
# 7. Does your school currently cooperate with companies from the sustainable waste management sector?



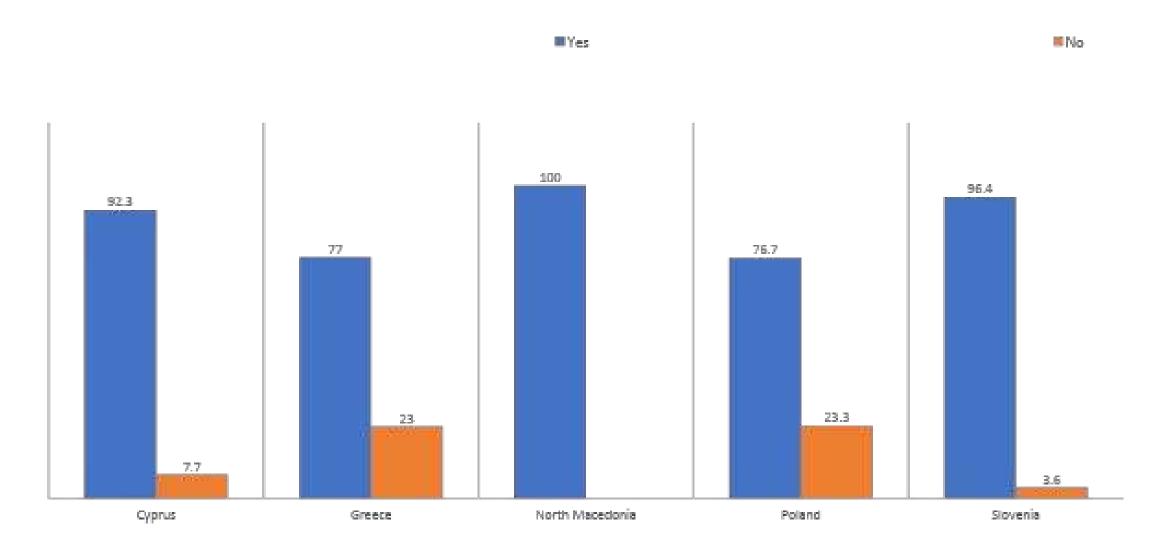
# 8. What is this cooperation about?



# 9. How, in the field in which you teach, students carry out practical vocational training?



# 11. Do you discuss topics related to waste management during your classes?



# 6. Please provide the name of the subject on which the issues of waste management were discussed

#### Cyprus

- Sustainable development
- Household economy
- Environmental Education and Education for Sustainable Development
- Waste recycling
- Environmental Education
- Life Education
- Environmental education -Education for Sustainable Development

#### Greece

- Curennt Legislation
- New Technologies
- English Language
- Circular Economy
- Type Of Waste

#### North Meceodnia

 Environment and sustainable development, Natural sciences, Biology. The topics on which students discuss are: waste separation, waste recycling, circular economy, "zero waste", waste packaging, followed by global and environmental challenges. Several other topics were mentioned: packaging then and now, consumer and behavioural patterns, values, morals, norms, environmental protection and proper disposal of waste, the subject of organic waste processing, sustainable development and storage and handling of radioactive waste

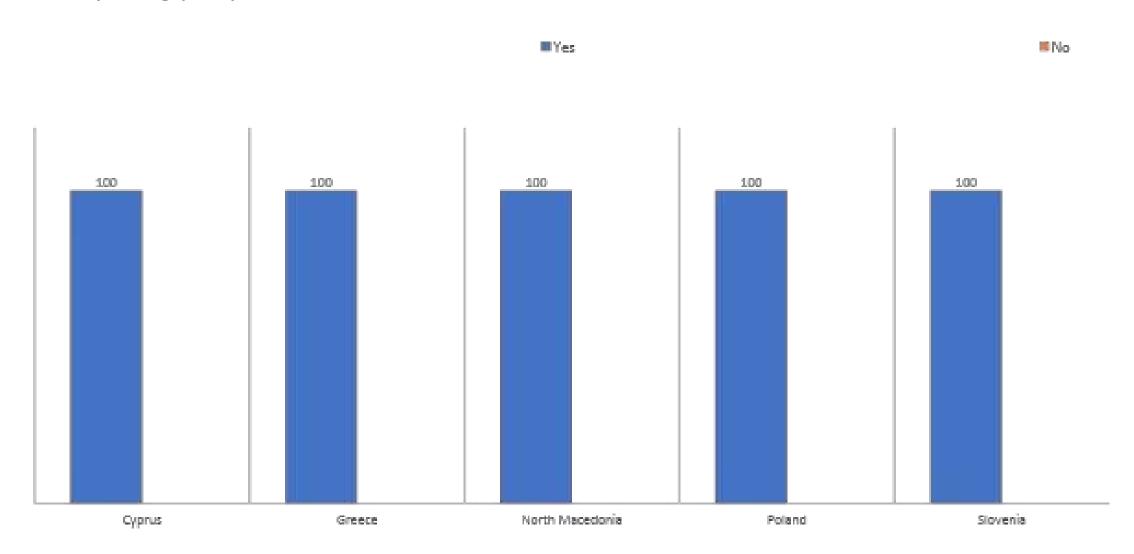
#### Poland

- Planning and implementation of tasks in soil protection and waste management Planning and using environmental protection activities
- Biology
- Geography

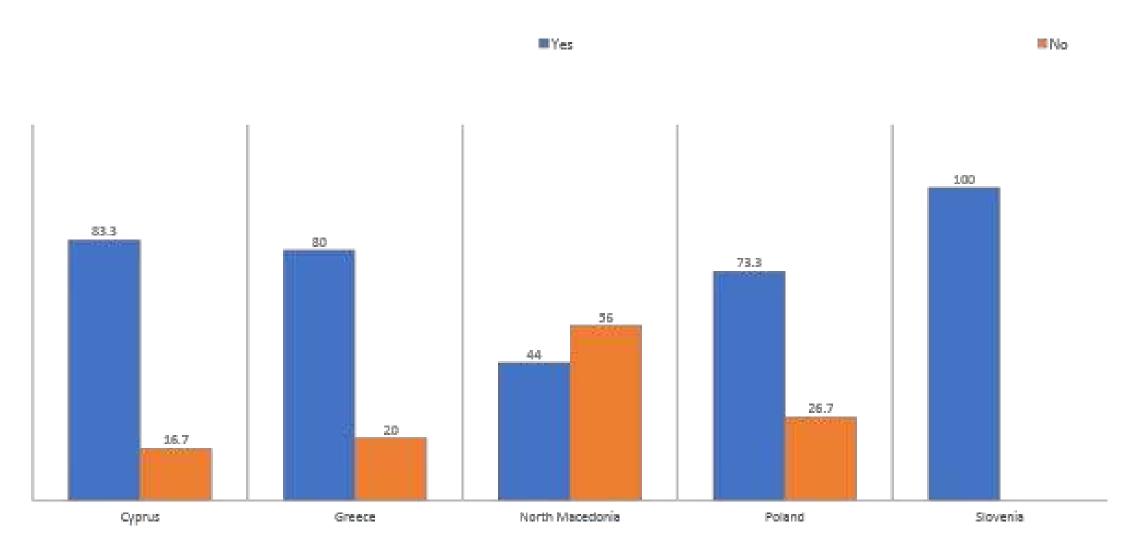
#### Slovenia

- The most common topics are waste separation, waste recycling, circular economy, "zero waste", waste packaging (45%), followed by global and environmental challenges (9.1%).
- Several other topics were mentioned: packaging then and now, consumer and behavioural patterns, values, morals, norms, environmental protection and proper disposal of waste, the subject of organic waste processing, sustainable development and storage and handling of radioactive waste.

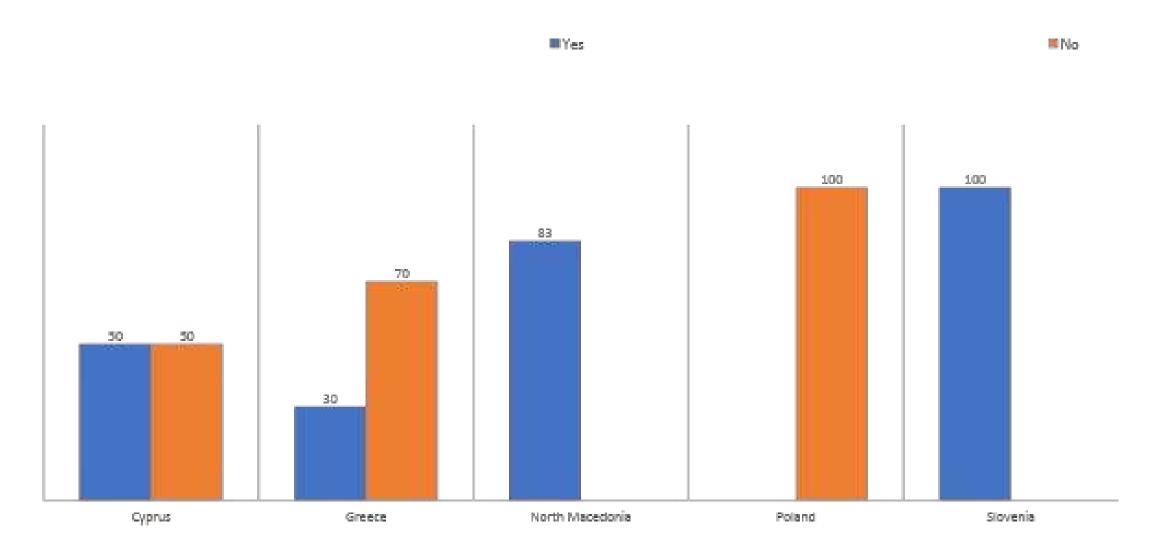
# 12. In your opinion, would it be reasonable to introduce such topics to activities with young people?



# 13. Is waste management conducted in the school?



# 14. Do you implement a circular economy in your school?



# 15. What circular economy activities can you propose in order to improve the sustainable waste management in your school?

#### Cyprus

- Reusing objects
- REUSE ITEMS
- At the moment recycling is done, waste reuse and waste composting can also be done
- Waste reuse
- Reusing objects
- Recycling, reuse of items
- It is currently being recycled. I suggest reuse.
- Recycling
- Composting
- Expansion of the pan movement

#### Greece

No answers

#### North Meceodnia

 A large proportion of respondents expressed that they did not have enough knowledge and experience in this area, so they did not make any suggestions (45%). The rest of the respondents gave some examples such us: Cooperation with companies for utilization of leaf weight, recycling and composting.

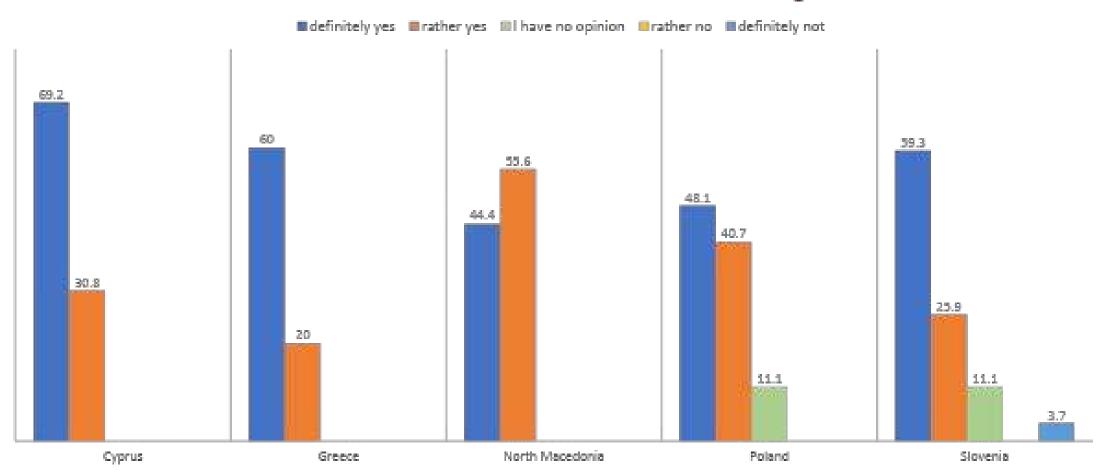
#### Poland

- Workshops for young people. Cooperation with the local Radkom companies (collection, disposal and reuse of waste)
- Reducing paper consumption, reusing folders and binders, using used materials for making them into gadgets, teaching aids, composting the plants around the school instead of disposing them in brown bags, and use of compost in the school nursery for ornamental plants.

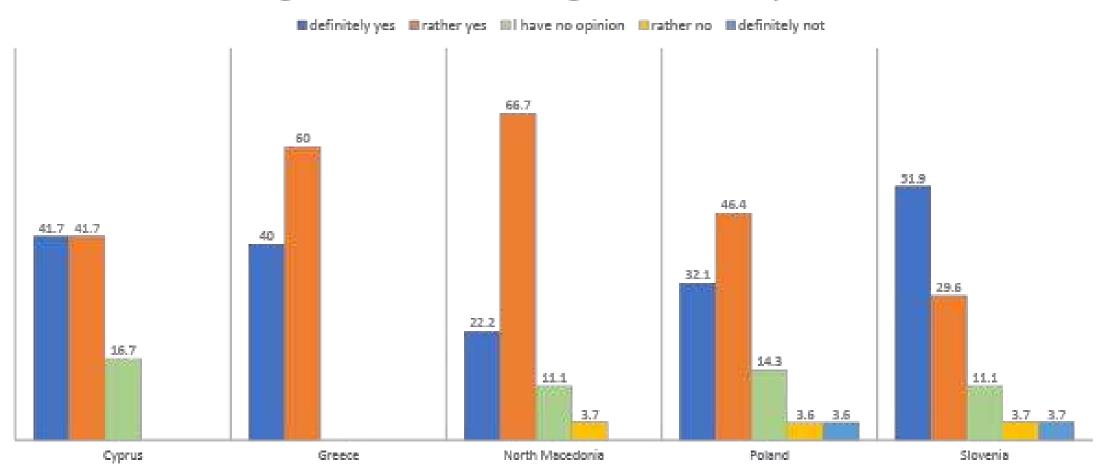
#### Slovenia

• A large proportion of respondents expressed that they did not have enough knowledge and experience in this area, so they did not make any suggestions (40%). Recycling workshops, reduction and elimination of plastic packaging, reuse of leftover raw materials (26%), organizing waste collection campaigns, banning the purchase of plastic waste (13.3%).

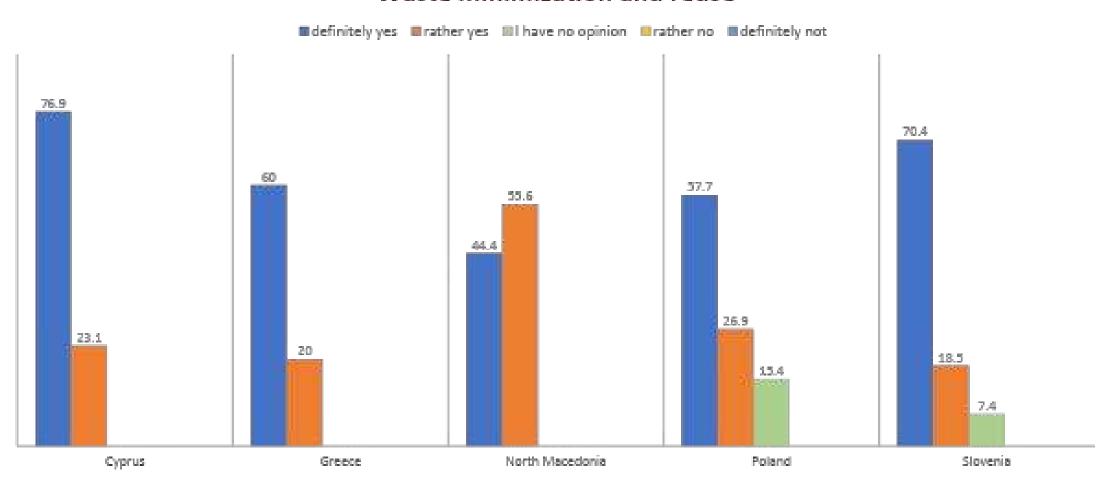
### General information on sustainable waste management



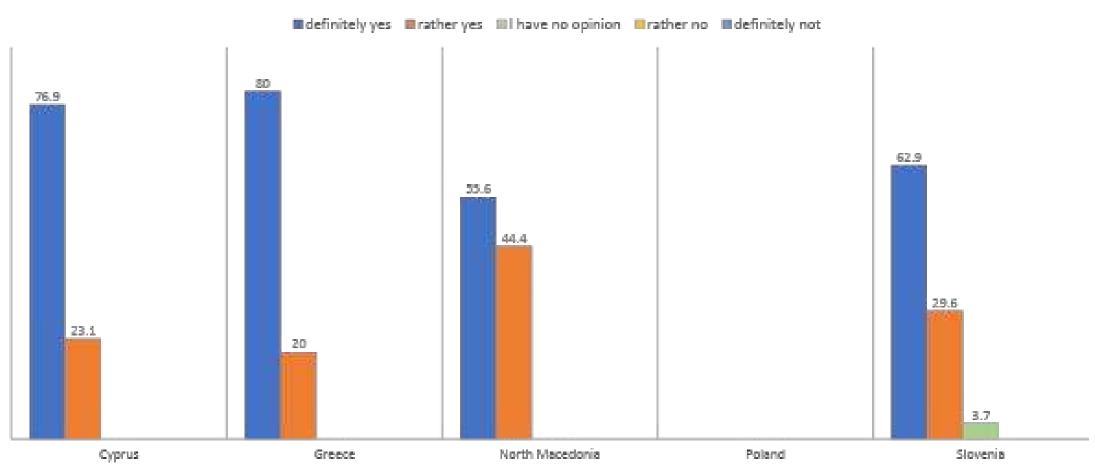
# Organization of waste mangement in municipalities



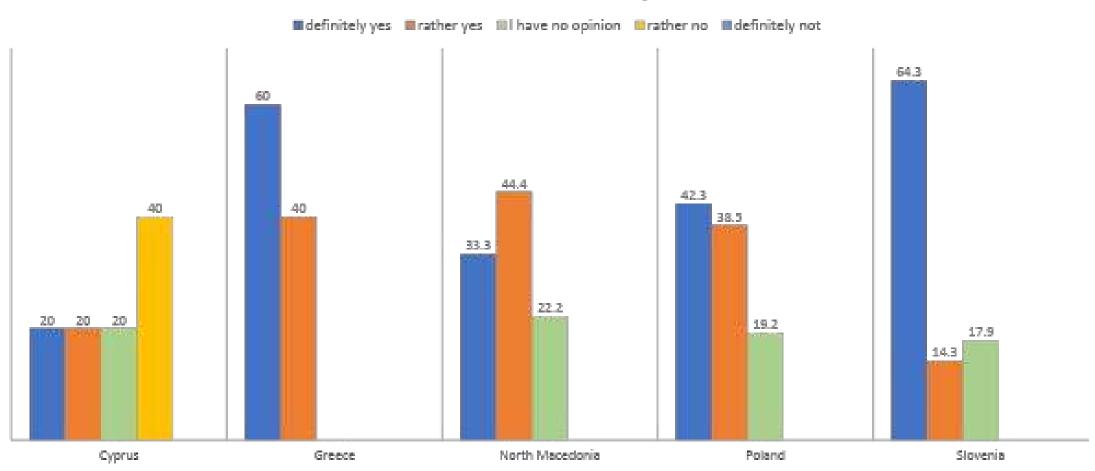
#### Waste minimization and reuse



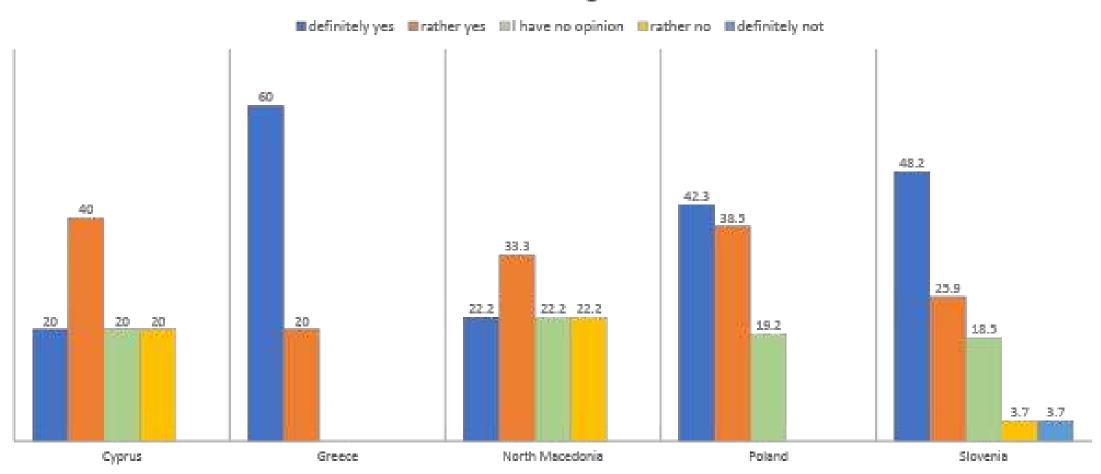
# Waste recycling



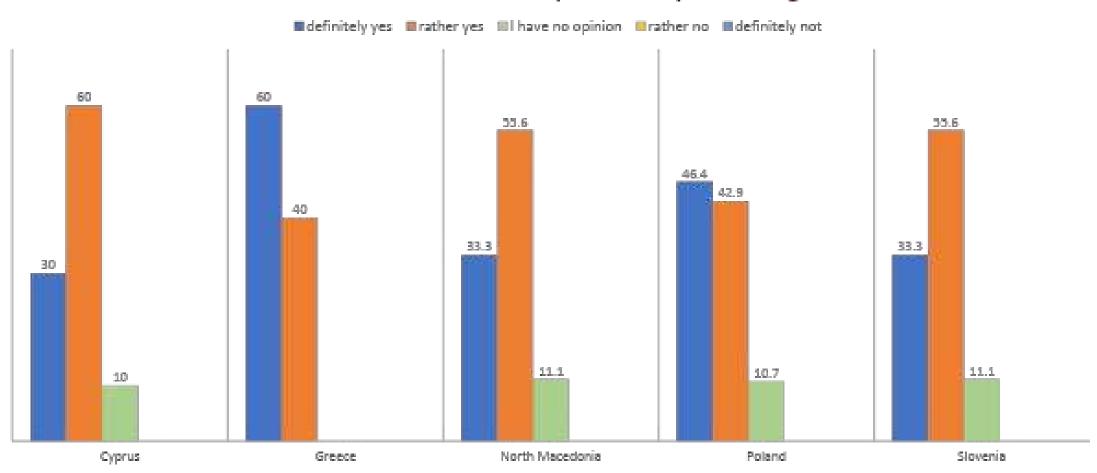
# Circular economy



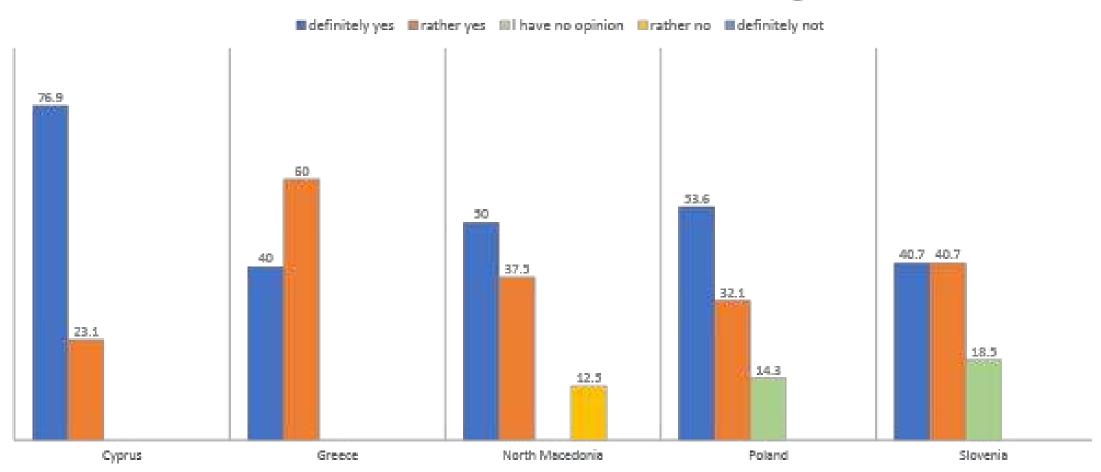
### Source of waste generation



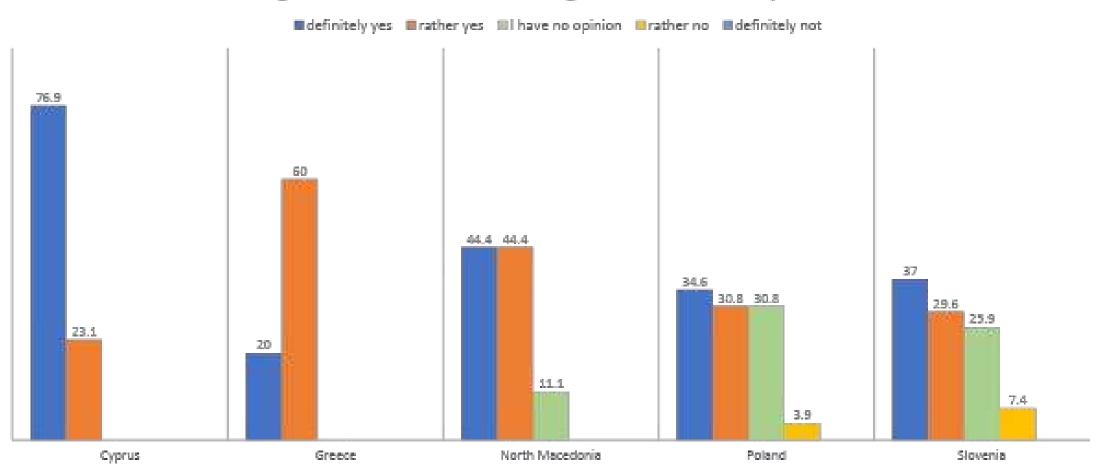
# Methods of waste disposal and processing



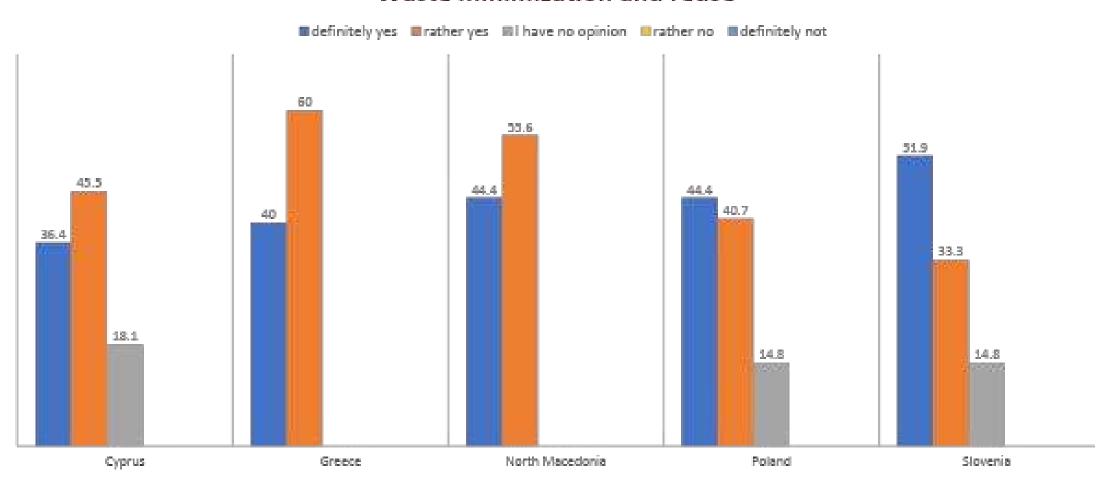
# General information on sustainable waste management



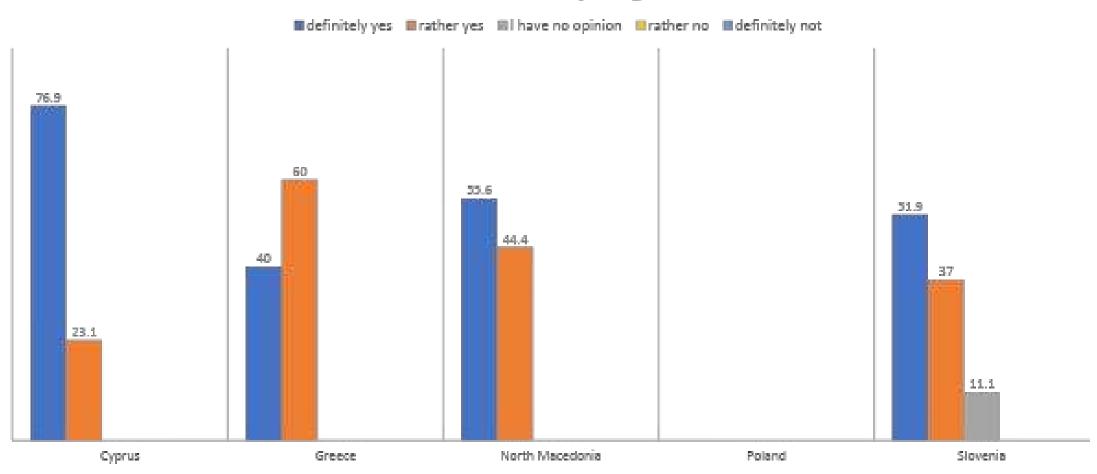
# Organization of waste mangement in municipalities



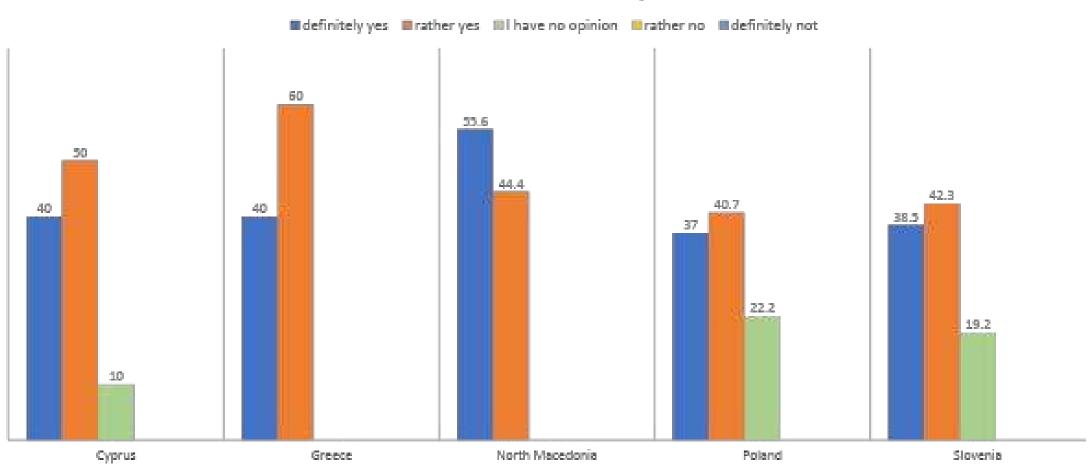
#### Waste minimization and reuse



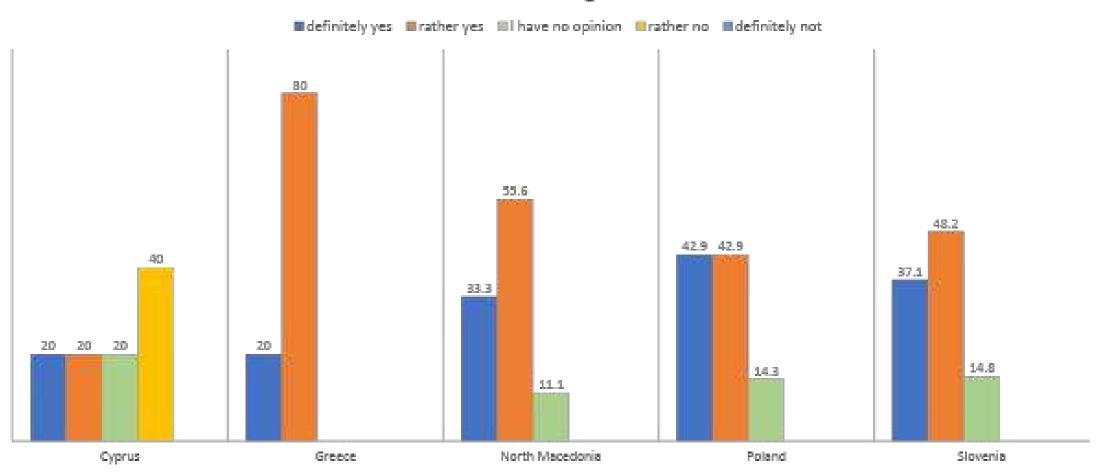
### Waste recycling



# Circular economy



# Source of waste generation



# Methods of waste disposal and processing

