

# WORKSHOP: DEVELOPING CRITICAL THINKING SKILLS IN GREEN JOBS - SCENARIO



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## 1. Wstęp

Nowadays, in the face of global environmental challenges, green professions are becoming increasingly crucial to ensure sustainability and protect our planet. To successfully address these challenges, it is essential to have well-developed critical thinking skills to analyse complex problems, make informed decisions and introduce innovative solutions.

This scenario is designed for educators who wish to equip their participants with these essential competences. The modular programme consists of several key areas that gradually introduce participants to the complexity of critical thinking and its applications in the context of green professions.

The aim of this programme is to develop participants' analytical thinking skills, the ability to identify and solve problems related to green transformation, an understanding of the impact of critical thinking on innovation and efficiency, and the ability to have reasoned discussions and defend their own views.

This scenario has been designed to enable educators to teach in an engaging and effective way, using elaborate methods and tools that help develop participants' critical thinking. Each module provides a solid theoretical basis whilst also pointing to practical applications of the issues discussed, allowing them to be easily transferred to professional realities.

A range of tools and materials are available within the prepared learning scenario, which can be adapted to the needs of your participants and your training objectives.

## 2. List of available resources



A self-assessment test of the participant's knowledge and skills – before the training.

This test allows participants to assess their level of knowledge and skills prior to the training. It can be used to identify areas that require special attention during the course.



Module scenario for educator including definition of learning outcomes and validation criteria.

The scenario provides detailed guidelines for conducting the modules, including clearly defined learning outcomes and validation criteria that will help assess participants' progress. Some outcomes have already been defined, which will facilitate the planning and implementation of course activities.



Multimedia presentation.

A prepared multimedia presentation visually supports the delivery of content during training. It can be used to illustrate key points, making it easier for participants to absorb information.



Three podcasts.

The podcasts can be used as additional learning materials that participants can listen to before or after the class. They are short recordings discussing key issues related to the topics of green competence and critical thinking.



## Five quizzes/tests/comics

These tools can be used both as assessment tools at various stages of training and as a way of checking the extent to which participants have assimilated the content discussed and to support discussion.



## Ten exercises/assignments

Exercises and assignments are a key element of active learning. They are designed to engage participants, support the development of their critical thinking skills and the practical application of acquired knowledge in the context of real environmental problems.



## Verification Process Scenario with Final Test

This scenario includes a description of the final assessment process, including a post-test and guidance for the educator on checking results and providing feedback. This is a key part of verifying the learning outcomes achieved by participants and assessing their progress.

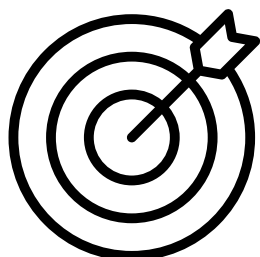
Each of the above tools can be flexibly adapted to the structure and dynamics of a training course, allowing the materials to be tailored to the needs of the group and to meet the intended learning objectives. We encourage you to use the full range of resources available to fully support participants' learning and effectively develop their competences in sustainability and ecology.

We believe that this programme will not only enhance the competences of the participants, but will also contribute to their greater awareness and involvement in green transformation processes, positively influencing their future work in the field of sustainable development.

We invite you to read the full scenario and wish you fruitful work with your participants!

## MODULE I

### Developing Critical Thinking Skills in Green Jobs



The aim of the module is to develop critical thinking skills in the context of green professions that will enable participants to effectively address green transition issues, make informed decisions and have reasoned discussions on environmental and sustainability issues.

#### Learning outcomes:

- ➔ Development of analytical thinking and judgement skills: participants will be able to systematically analyse available information, assess its reliability and formulate sound conclusions.
- ➔ Ability to identify, analyse and solve green transformation issues: participants will be able to identify key green transition issues, analyse them and propose practical and innovative solutions.
- ➔ **Understanding the impact of critical thinking on efficiency and innovation in green jobs:** participants will understand how critical thinking contributes to more effective action and innovation in the field of green jobs.
- ➔ **Increased ability to hold reasoned discussions and defend one's own points of view:** participants will be able to engage in logical discussions on green transition issues, defending their views based on facts and evidence.

## Introduction to Critical Thinking

In the first module, participants will be introduced to the basics of critical thinking, which provide a foundation for further learning. This module will focus on the definition of critical thinking, its importance in green jobs and basic cognitive processes such as analysis, synthesis and evaluation.

## Content

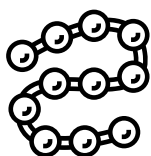
- ➔ What is critical thinking?
- ➔ Definition of critical thinking as the process of systematically considering information, assessing its credibility and making informed decisions.
- ➔ The importance of critical thinking in the context of green professions, including its role in decision-making and environmental problem-solving.

## Cognitive processes involved in critical thinking:



### Analysis

Breaking down information into its component parts to understand its structure and interrelationships.



### Synthesis

Creating new wholes on the basis of the information gathered, allowing new ideas and solutions to be formulated.



### Evaluation

Verification of information and assessment of its value and relevance in the context of decision-making.



## Learning outcomes



Participants will understand the basic principles of critical thinking and be able to apply them in practice, particularly in the context of analysing environmental problems.

## Validation criteria



Participants can define critical thinking and explain its importance in green jobs



Participants can identify and describe basic cognitive processes: analysis, synthesis and evaluation

## Questions that can be asked of participants in Module I



What is the importance of critical thinking in your professional work, especially in the context of green jobs?



Can anyone share an example of how you have applied critical thinking in your work or daily life?



How do you think the processes of analysis, synthesis and evaluation can help solve the environmental problems you face?



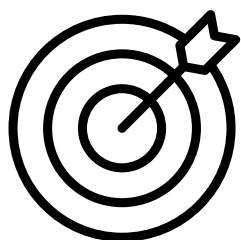
Have any of you encountered logical errors that distorted thinking or decision-making? What kind of errors were these?



How do you deal with cognitive biases in your work? Do you have any strategies that you would like to share with the group?

## MODULE II

### Critical Thinking in the Analysis of Environmental Problems



Module two focuses on applying critical thinking to the analysis of real environmental problems. Participants will learn how to identify problems, analyse them and propose effective and sustainable solutions, taking into account the possible impacts of actions.

## Content

- ➔ **Problem identification:** Identification of key green transformation challenges and their causes
- ➔ **Cause-effect analysis:** Understanding how different factors influence each other and lead to specific environmental problems
- ➔ **Assessing the outcomes of the proposed solutions:** Predicting the possible outcomes of different actions and their impact on the environment and society

## Case studies

- ➔ Analysis of real environmental problems such as climate change, air pollution, water, waste management, etc.
- ➔ Proposing solutions that are efficient, innovative and sustainable.



## Learning outcomes



Participants will be able to apply critical thinking to the analysis of environmental problems, from their identification to the assessment of the impact of possible solutions.

## Validation criteria



Participants are able to identify key environmental issues and provide methods for their analysis



Participants are able to carry out a cause-effect analysis of environmental problems and assess the impact of proposed solutions.

## Questions that can be asked of participants in Module II



What methods do you consider most effective for analysing environmental problems? Would anyone like to share their experience?



Can you collectively identify the key causes of the environmental problems you faced? What were these causes?



Who could talk about the environmental problem they analysed and what steps they used to find a solution?



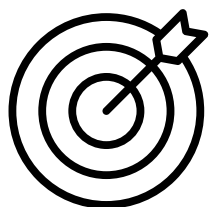
What data do you consider to be key to a thorough analysis of environmental problems? What methods do you use to obtain them?



What tools and techniques support your critical thinking in working on the green transformation? Would anyone like to share their methods?

## MODULE III

### Critical Thinking in the Decision-Making Process



In the third module, participants will develop skills related to decision-making based on critical thinking. Methods for evaluating options, analysing risks and considering benefits will be presented, which is crucial in the green technology sector.

#### Content

- ➔ **Assessing options:** How to evaluate available alternatives in the context of sustainability and green transformation
- ➔ **Risk analysis:** Understanding the potential risks associated with different options and how to minimise them
- ➔ **Considering benefits:** How to measure and evaluate benefits, both short-term and long-term, in the context of environmental decisions

#### Examples of sustainable decision-making in the green technology sector

- ➔ An overview of real cases where critical thinking was applied to make decisions that had a positive impact on the environment
- ➔ Analysis of the successes and failures of these decisions and lessons for the future

## Learning outcomes



Participants will be able to apply critical thinking to the decision-making process, evaluating options, risks and benefits in the context of green jobs.

## Validation criteria



Participants are able to carry out an assessment of the available options, identify risks and benefits, and select the most sustainable solution



Participants are able to provide an example of a sustainable decision from the green technology sector and analyse its impact

## Questions that can be asked of participants in Module III



What factors do you consider when evaluating different options in your decision-making process? Do any of you have specific examples?



Have any of you had to deal with a difficult career decision related to green technologies? What were the results?



What ways do you have of assessing the risks of innovating in your professions? Would anyone like to share their perspective?



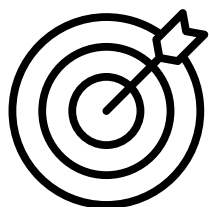
How a balanced decision-making approach affects the efficiency and long-term success of your projects?



What methods do you use to ensure that the decisions you make are well thought out and based on sound analysis?

## MODULE IV

### Critical Thinking and Communication



The final module focuses on the role of critical thinking in communication. Participants will learn how to argue effectively, present their positions and have reasoned discussions on green transformation issues.

#### Content

- ➔ Developing the ability to present your arguments logically and persuasively
- ➔ Techniques for defending one's own positions in discussions, especially in the context of difficult and controversial environmental topics
- ➔ Techniques for effective and persuasive communication supported by critical thinking
- ➔ How to present your arguments clearly and convincingly, based on facts and evidence
- ➔ Avoiding manipulation and cognitive traps in communication that can undermine the power of arguments

#### Learning outcomes



Participants will be able to have reasoned discussions, argue effectively and defend their views in the context of a green transition.

## Validation criteria

- Participants are able to present their positions in a discussion using logical arguments and facts
- Participants are able to defend their views effectively, avoiding logical fallacies and manipulation

## Questions which may be asked of participants in Module IV

- ❓ What communication techniques do you find most effective when trying to convince others of your environmental ideas?
- ❓ Have any of you had the opportunity to successfully defend your position in a discussion? What arguments have proved most effective?
- ❓ What challenges do you face when trying to convince others of your point of view in the context of sustainable development?
- ❓ What strategies do you use to avoid misunderstandings and logical fallacies in your communication?
- ❓ How does critical thinking affect the way you present your arguments in discussions on environmental issues? Can any of you share an example?

# Workshop: Developing critical thinking skills in green jobs - scenario



Upon completion of the four modules, participants should have a solid foundation in critical thinking and the ability to apply it to green jobs. They will be able to analyse environmental problems, make sustainable decisions and have reasoned discussions. With developed critical thinking skills, participants will become more informed, effective and innovative in their work, contributing to positive change in the area of sustainability.

This scenario has been designed to meet all the intended learning outcomes, providing participants with a solid theoretical foundation and the practical skills necessary to operate effectively in green jobs.



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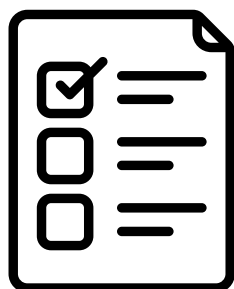




## ALIGNMENT OF EXERCISES WITH MODULES

### MODULE I

#### Exercise 1: Understanding Critical Thinking



This exercise integrates perfectly with the content of Module 1, as it allows participants to directly apply critical thinking theory to their own professional experience. This allows participants to better understand how theoretical concepts such as analysis, synthesis and evaluation are applied in real-life situations, which is a key element of this module.

#### Learning outcomes supported by the exercise

- Participants are able to recognise and identify work situations in which they have applied critical thinking.
- Participants are able to explain how cognitive processes such as analysis, synthesis and evaluation were applied in practice.
- Participants will be able to present their critical thinking experiences to the group, which supports the development of argumentation and communication skills.



## Validation criteria:

- Participants actively participate in the exercise, sharing their examples and engaging in discussions.
- Participants are able to identify the cognitive processes used in their examples and present them in a group presentation.
- Participants demonstrate an understanding of the role of critical thinking in professional decision-making.

This exercise is an integral part of Module 1, supporting its learning objectives through the practical application of acquired knowledge in real work contexts.



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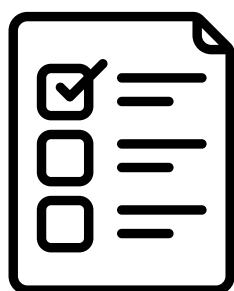
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## ALIGNMENT OF EXERCISES WITH MODULES

### MODULE II

#### Exercise 2: Analysis of Cognitive Processes – Analysis, Synthesis, Evaluation






This exercise integrates perfectly with the content of Module 2, as it enables participants to practically apply critical thinking to the analysis of real environmental problems. Through this exercise, participants will be able to not only understand but also experience how the processes of analysis, synthesis and evaluation help to solve complex green transformation challenges.

#### Learning outcomes supported by the exercise

- Participants are able to carry out a comprehensive analysis of an environmental problem, identifying key elements and relationships
- Participants are able to integrate different information and propose sustainable solutions based on a process of synthesis
- Participants will be able to assess the effectiveness and feasibility of proposed solutions, taking into account the needs of different stakeholders

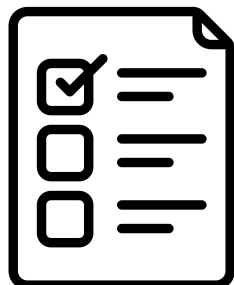


## Validation criteria:

-  Participants are actively involved in the process of analysis, synthesis and evaluation of the problem.
-  Participants are able to logically justify their conclusions in a group presentation.
-  Participants demonstrate an understanding of applied cognitive processes in the context of environmental decision-making.

This exercise is an integral part of **Module 2**, supporting its learning objectives through the practical application of critical thinking in the analysis and solution of real environmental problems.

## Exercise 4: Analysis of Environmental Problems



This exercise integrates theory and practice, enabling participants to apply methods of analysis in real environmental contexts. The exercise allows for a fuller understanding of the impact of different factors on the environment and the development of critical thinking skills for decision-making.

### Learning outcomes supported by the exercise

- ➔ Participants are able to carry out a comprehensive analysis of an environmental problem, identifying strengths, weaknesses, opportunities and threats.
- ➔ Participants are able to assess the impact of environmental problems at different stages of the life cycle.
- ➔ Participants are able to propose actions to minimise environmental risks.

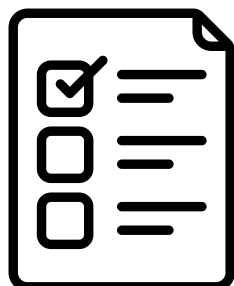


### Validation criteria:

- Participants actively participate in the analysis of environmental problems using the methods presented.
- Participants are able to logically justify their conclusions and present them in a group presentation.
- Participants demonstrate an understanding of the methods of analysis used in the context of environmental protection and sustainable development.

This exercise perfectly aligns with Module 2, supporting the development of critical thinking skills and analysis of environmental issues, which is key to making informed and sustainable decisions.

## Exercise 9: Analysis of Critical Scenarios and 'Black Swans' in Ecological Problems



This exercise perfectly supports the objectives of Module 2, as it develops the skills to analyse complex environmental problems, which can be unpredictable high-impact events. Participants learn to identify key risks, anticipate impacts and develop innovative and sustainable response strategies.

### Learning outcomes supported by the exercise

- Participants can identify and analyse risks associated with unpredictable events in an environmental context.
- Participants develop critical thinking and creative problem-solving skills in the face of complex challenges.
- Participants demonstrate the ability to develop strategies that can minimise risk and increase preparedness for the unexpected.



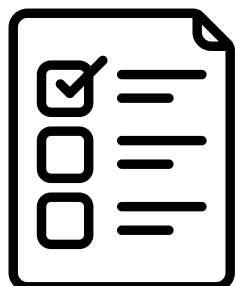
### Validation criteria:

- Participants actively engage in scenario analysis and solution development.
- Participants are able to present their analysis in a convincing and reasoned manner.
- Participants demonstrate an understanding of the complexity of environmental problems and the need for innovative approaches to solve them.

This exercise integrates key aspects of critical thinking and analysis of environmental problems, and is an essential component of Module 2. Participants gain the skills necessary to deal with unpredictable environmental challenges, which is crucial in green jobs.



## Exercise 10: Individual Worksheet – Analysis of Environmental Problems



This exercise integrates perfectly with the content of Module 2, as it enables participants to apply critical thinking to the analysis of real environmental problems. The individual work allows for the development of independent analysis skills and the subsequent joint discussion allows for a broader perspective and the development of common conclusions.

### Learning outcomes supported by the exercise

- Participants are able to independently identify and analyse an environmental problem, proposing potential solutions.
- Participants develop critical thinking skills by evaluating different options and anticipating consequences.
- Participants demonstrate an understanding of the interdisciplinarity of environmental problems and the need to involve different stakeholders in the solution process.



### Validation criteria:

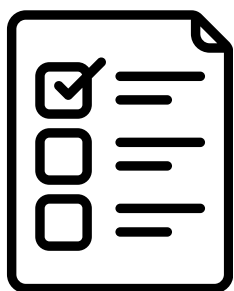
- Participants effectively carry out an analysis of the environmental problem according to the methodology presented.
- Participants actively participate in the discussion, presenting their findings and comparing them with others.
- Participants demonstrate an understanding of the complexity of environmental problems and the ability to think critically in the context of proposing solutions.

This exercise reinforces key skills related to critical thinking and analysis of environmental problems, an essential element of Module 2.

## ALIGNMENT OF EXERCISES WITH MODULES

### MODULE III

#### Exercise 3: Recognition and avoidance of logical fallacies






This exercise is an ideal supplement to Module 3, as it teaches participants how to recognise and avoid logical fallacies that can affect the quality of decision-making in the context of green jobs. It allows participants to develop critical thinking and make more informed, thoughtful decisions.

#### Learning outcomes supported by the exercise

- Participants are able to identify the most common logical errors in the decision-making process.
- Participants understand how avoiding logical fallacies affects the quality of their decisions.
- Participants will be able to apply knowledge of logical fallacies to their professional practice.



## Validation criteria:

-  Participants actively participate in the identification and discussion of logical fallacies.
-  Participants are able to present logical conclusions and propose strategies to avoid mistakes.
-  Participants demonstrate an understanding of how logical errors can affect professional decisions and how avoiding them can improve the quality of those decisions.

This exercise supports the key objectives of **Module 3**, focusing on developing critical thinking and informed decision-making skills in green jobs.



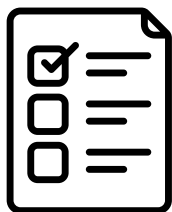
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## Exercise 5: The Impact of Critical Thinking on Green Technology Development



This exercise integrates critical thinking with practical challenges in the field of green technologies. Participants learn to evaluate available options, analyse risks and make informed decisions, which directly supports the learning objectives of Module 3.

### Learning outcomes supported by the exercise

- Participants are able to apply critical thinking in the analysis of problems and decisions related to green technologies.
- Participants understand how risk-benefit assessment influences the innovation process in the green technology sector.
- Participants are able to make informed and considered decisions, justifying them on the basis of thorough analysis.



### Validation criteria:

- Participants are actively involved in scenario analysis and decision-making.
- Participants are able to provide a logical rationale for their choices during the presentation.
- Participants demonstrate an understanding of the role of critical thinking in the development of green technologies.

This exercise is a key element of Module 3, supporting the development of critical thinking skills in the context of decision-making in green jobs.

## ALIGNMENT OF EXERCISES WITH MODULES

### MODULE IV

#### Exercise 6: Critical Thinking and Communication – Ability to Argue and Defend Own Views



This exercise integrates perfectly with the content of Module 4, as it develops the skills of argumentation, defence of positions and critical thinking that are crucial in debates and negotiations related to green technologies and environmental protection.

#### Learning outcomes supported by the exercise

- Participants are able to effectively argue and defend their position in debates on environmental issues.
- Participants understand how critical thinking affects the effectiveness of communication and negotiation.
- Participants are able to use logical reasoning and evidence in the argumentation process.



#### Validation criteria:

- Participants are actively involved in scenario analysis and argument development.
- Participants are able to present and defend their position in a debate.
- Participants demonstrate an understanding of the role of critical thinking in the process of arguing and defending their own views.

This exercise supports the objectives of Module 4, developing key critical thinking and communication skills in the context of green jobs.

## Exercise 7: Techniques for Effective and Persuasive Communication Supported by Critical Thinking



This exercise perfectly complements the content of Module 4, enabling participants to develop effective communication and argumentation skills, which is crucial in green jobs. Participants learn how to effectively argue for green initiatives by implementing techniques supported by critical thinking.

### Learning outcomes supported by the exercise

- Participants are able to present their arguments in a convincing and reasoned manner.
- Participants understand the importance of critical thinking in effective communication.
- Participants develop skills to adapt communication to the audience and context.



### Validation criteria:

- Participants are actively involved in scenario analysis and argument development.
- Participants are able to present their position convincingly and reasonably
- Participants demonstrate an understanding of how critical thinking supports effective communication

This exercise supports the objectives of Module 4, developing key communication and argumentation skills in the context of green jobs.



## Exercise 8: Presentation of a Solution to a Selected Environmental Problem



This exercise is an excellent summary of Module 4, as it combines critical thinking skills with practical application of communication techniques. Participants have the opportunity to demonstrate their teamwork by solving real environmental problems and then presenting their solutions in a convincing and well-organised manner.

### Learning outcomes supported by the exercise

- Participants are able to identify and analyse environmental problems and develop practical solutions.
- Participants develop communication skills, including effective presentation and defence of their position.
- Participants demonstrate an understanding of the role of critical thinking and communication in solving environmental problems.



### Validation criteria:

- Participants are able to identify key environmental problems and propose solutions that are realistic and based on critical thinking.
- Participants effectively communicate their solutions, arguing convincingly in favour of their chosen strategies.
- Participants are able to defend their position during discussions, demonstrating critical thinking and effective communication skills.

This exercise integrates critical thinking and communication skills, supporting the objectives of Module 4 through the practical application of acquired knowledge in the context of real environmental problems.

## SUMMARY

The topic of green competence and ecology is extremely relevant today, when the world is facing global challenges related to environmental protection, climate change and sustainable development. Green competence education is a key element in building awareness and the ability to make responsible decisions that contribute to the protection of our planet. Understanding environmental issues, critical thinking skills and the ability to analyse and solve complex environmental problems are becoming indispensable elements of a modern society.

Embarking on green competence education is the first step towards the change that is needed to meet the challenges that our society faces. It is an investment in the future that will benefit both us and future generations. As the famous environmentalist David Attenborough said: *„We live in a world where we need to learn more and more about nature, not only to understand its beauty, but to understand how we can save ourselves.“*

Every step we take towards education and the development of green competences is a step towards a more sustainable and responsible future. What starts today can become the foundation for great changes that will benefit the environment and all of humanity.

The topic of green skills and ecology is extremely important today, as the world faces global challenges related to environmental protection, climate change, and sustainable development. Education in ecological competencies is a key element in building awareness and the ability to make responsible decisions that contribute to the protection of our planet. Understanding environmental issues, the ability to think critically, and the capacity to analyze and solve complex ecological problems are becoming indispensable elements of modern society.

The use of the scenario is a signpost on this educational journey. It can be used at any stage of teaching and improving green competences – both in the planning of activities, their implementation and in the validation of the results achieved. The scenario helps to approach environmental education in a systematic way, providing a solid foundation and structure that supports the achievement of the set goals.

With this tool, educators and participants have a clear step-by-step roadmap to building the environmental awareness and skills needed to create a sustainable future. Every step of education – from planning to implementation to evaluation of results – is supported by this scenario, making it an invaluable resource in the process of developing green competences.

Each participant who successfully completes the training course entitled: "Developing Green Competences and Critical Thinking", will receive Certificate of Completion of the Training Course. This certificate will provide formal confirmation of the skills and knowledge acquired, which are necessary to operate effectively in the field of green professions and environmental protection.

# CERTIFICATE

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*Name of Participant*

is hereby awarded this Certificate of Completion for successfully completing the training course entitled:

## **"Developing Green Competences and Critical Thinking"**

The training was held on: .....

Training venue: .....

### **The training covered:**

- development of analytical thinking skills and judgement in relation to environmental problems.
- identifying, analysing and resolving green transition issues.
- understanding the impact of critical thinking on efficiency and innovation in green jobs.
- an increased ability to hold reasoned discussions and defend one's own points of view.

The training was designed to equip participants with the practical tools and knowledge necessary for effective action on sustainability and environmental protection.

The certificate was issued by:

*Name of facilitator*

*Position*

*Organisation/Company*