Funded by the European Union

CEIPES

KYIV BUSINESS SCHOOL

Fundacja Marki Polskiej im. prof. Witolda Kieżun

Education Centre "Socialization"

Project GYW

2022-1-PL01-KA220-YOU-000085715

SUMMER SCHOOL

MODULE II

Co-funded by the European Union

Project“GYW. Green Work 4 Youth: green skills for young people with fewer opportunities for reducing of the risk of marginalisation the labour market in the transition to a sustainable economy” Erasmus + 2022-1-PL01-KA220-YOU-000085715

SUMMER SCHOOL

“Green skills of youth at risk of marginalization for successful employment and work in the transition to a more ‘green’ and environmentally sustainable economy” for youth organization and youth workers

Green skills for youth at risk of marginalization: green skills, EU GreenComp, green employment, upskilling and reskilling for the green transitions, changes in workplaces of the future.

DAY #2 - 04.07.2024

NATALIA ANDREA AGUAYO SUY, CEIPES

Education Centre "Socialization"


ITALY

Green Skills

What does it mean?

Green skills are the knowledge, abilities, values and attitudes needed to live in, develop and support a sustainable and resource -efficient society (United Nation Industrial Development Organization).

Green Skills

Why are they important?

Having green skills can make you **more competitive in the job market**, opening up opportunities in various sectors including renewable energy, sustainable agriculture, and green construction

The transition to a green economy is creating **new job markets**. Job seekers with green skills can tap into these growing fields, ensuring a dynamic and forward-looking career path

Employees with green skills are more likely to have **job security**. These skills help in adapting to changes in the workplace, ensuring that job seekers are equipped for the future job market that prioritizes sustainability.

Green skills enable individuals to **contribute to environmentally sustainable practices** that are crucial in combating climate change and preserving natural resources.

GreenComp

GreenComp is a reference framework for sustainability competences. It serves as a common foundation for learners and provides guidance for educators on teaching sustainability.

The aim of GreenComp is to foster a sustainability mindset by helping users develop the knowledge, skills and attitudes to think, plan and act with empathy, responsibility, and care for our planet.

Green Competences according to the GreenComp

Embodying sustainability values:

- Valuing sustainability
- Supporting fairness
- Promoting nature

Embracing complexity in sustainability:

- Systems thinking
- Critical thinking
- Problem framing

Envisioning sustainable futures:

- Futures literacy
- Adaptability
- Exploratory thinking

Acting for sustainability:

- Political agency
- Collective action
- Individual initiative

EMBODYING SUSTAINABLE VALUES

I: Valuing sustainability

II: Supporting fairness

III: Promoting Nature

Embodying sustainable values

Valuing Sustainability

In today's rapidly changing world, sustainability is critical to a better future. GreenComp's **Valuing Sustainability competency** emphasizes recognizing and prioritizing the long-term environmental, social, and economic impacts of decisions. This competency involves making decisions that promote ecological balance, social equity, and economic prosperity.

Valuing sustainability

Importance

Environmental preservation

With the increasing threat of climate change, resource depletion, and loss of biodiversity, adopting sustainable practices is essential to protect the environment and ecosystems that support life on Earth.

Social responsibility

By valuing sustainability, organizations and individuals can address social issues, such as inequality, poverty, and community well-being, contributing to a more equitable and inclusive society.

Future Generations

Valuing sustainability promotes intergenerational equity by ensuring that the needs of both current and future generations are considered in decision-making processes

Valuing sustainability

Knowledge, skills and attitudes.

Knows the main views on sustainability: anthropocentrism (human-centric), technocentrism (technological solutions to ecological problems) and ecocentrism (nature-centred), and how they influence assumptions and arguments.

Can articulate and negotiate sustainability values, principles and objectives while recognising different viewpoints.

Is prone to acting in line with values and principles for sustainability.

Embodying sustainable values

Supporting fairness

In the context of environmental protection and preserving nature for future generations, the competence "Supporting Fairness" denotes the promotion of equitable practices and decision-making that respect both the present and future generations' right to a clean and healthy environment.

Supporting Fairness

Importance

Environmental Justice

It helps ensure that all communities, regardless of their socio-economic status, bear a fair share of environmental responsibilities and enjoy equal access to environmental benefits.

Intergenerational Equity

It promotes sustainable practices to ensure we don't compromise the ability of future generations to meet their needs.

Inclusive Decision-Making

Fairness in environmental protection includes all stakeholders in decision-making processes, acknowledging and respecting the rights and voices of often marginalized or underrepresented groups.

Supporting Fairness

Knowledge, skills and attitudes.

Knows that ethical concepts and justice for current and future generations are related to protecting nature.

Can apply equity and justice for current and future generations as criteria for environmental preservation and the use of natural resources.

Is committed to respecting the interests of future generations.

Embodying sustainable values

Promoting nature

In essence, "promoting nature" refers to any activities that enhance understanding, appreciation, preservation, restoration, and sustainable interaction with the natural environment.

Valuing sustainability

Importance

Raising Awareness

Promoting nature involves education and advocacy to raise public awareness about the importance and value of nature, including the role it plays in sustaining life, providing resources, and contributing to well-being.

Conservation Efforts

Efforts to conserve biodiversity and protect natural habitats from degradation. Such efforts may include supporting conservation programs, advocating for protective legislation, or adopting sustainable practices to minimize impact on the environment.

Nature Restoration

Promoting nature also involves activities aimed at restoring and rehabilitating degraded natural environments, such as reforestation projects, wetland restoration, or the cleanup and remediation of polluted sites.

Sustainable Interaction

It means promoting ways for humans to interact with nature in a sustainable manner, which respects and preserves its intrinsic value. This could involve promoting sustainable tourism, sustainable agriculture, or other practices that seek to balance human use with the preservation of natural systems.

Promoting nature

Knowledge, skills and attitudes.

Understands that our well-being, health, and safety are inextricably linked to the health and resilience of natural ecosystems.

Can evaluate their own actions and their impact on nature, seeing the protection and conservation of the natural environment as a fundamental responsibility for all.

Values and actively promotes a balanced and harmonious relationship between humans and nature, advocating for sustainable practices and policies that enhance biodiversity and ecological health.

EMBRACING COMPLEXITY IN SUSTAINABILITY

I: System thinking

II: Critical thinking

III: Problem framing

EMBRACING COMPLEXITY IN SUSTAINABILITY

System thinking

Systems thinking refers to the ability to understand and analyze complex systems and their interconnections within the environmental, social, and economic realms. It involves recognizing that these systems are composed of interconnected parts that influence each other and function as a whole.

Systems Thinking

Why is it important?

Systems thinking is vital for Green Skills in the transition to a more 'green' and environmentally sustainable economy. It helps people understand:

- the complexity of sustainability challenges,
- identify strategic intervention points,
- anticipate systemic impacts,
- design integrated solutions,
- foster collaboration,
- navigate uncertainty,
- promote long-term thinking.

By applying systems thinking, individuals can contribute to effective and sustainable solutions that drive the transition to a greener and more sustainable future.

System thinking

Knowledge, skills and attitudes.

Knows that every human action has environmental, social, cultural and economic impacts;

Can describe sustainability as a holistic concept that includes environmental, economic, social, and cultural issues;

Is concerned about the short- and long-term impacts of personal actions on others and the planet.

EMBRACING COMPLEXITY IN SUSTAINABILITY

Critical thinking

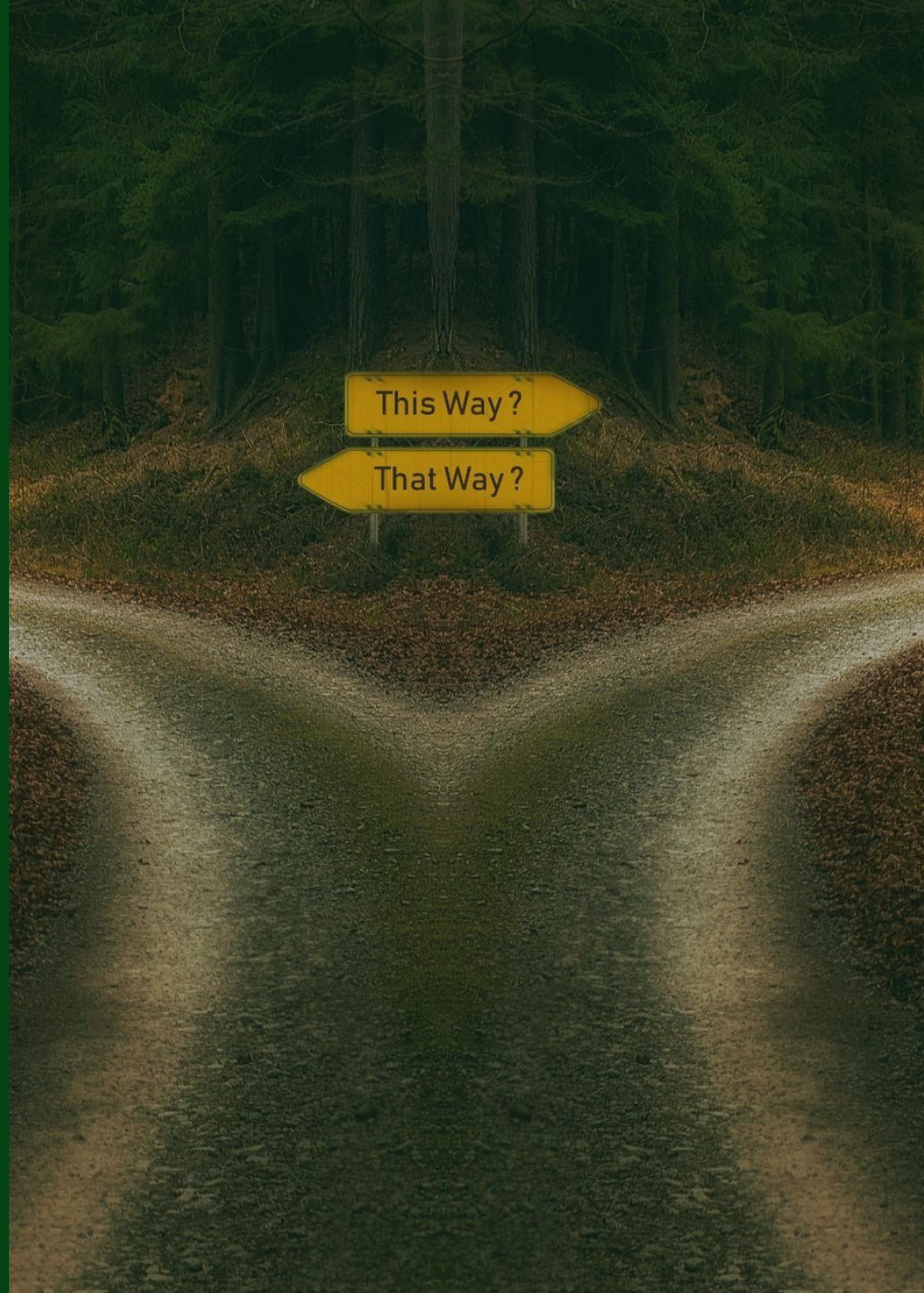
Critical thinking refers to the intellectual process of analyzing, evaluating, and interpreting information and ideas in a systematic and objective manner, goes beyond accepting information at face value and instead encourages questioning, examining assumptions, considering alternative perspectives, and seeking logical coherence.

Critical Thinking

Why is it important?

Critical thinking is essential for effective problem-solving, informed decision-making, analyzing information, constructing coherent arguments, fostering creativity, facilitating lifelong learning, and empowering independence. It is a foundational skill that equips individuals with the tools to navigate the complexities of today's world and make thoughtful, reasoned choices. It includes:

- Effective problem-solving
- Decision-making
- Analyzing and evaluating information
- Constructing coherent arguments
- Enhancing creativity and innovation:
- Lifelong learning: Empowering independence



Critical Thinking

Knowledge, skills and attitudes.

Knows sustainability claims without robust evidence are often mere communication strategies, also known as greenwashing;

Can analyse and assess arguments, ideas, actions and scenarios to determine whether they are in line with evidence and values in terms of sustainability.

Trusts science even when lacking some of the knowledge required to fully understand scientific claims.

EMBRACING COMPLEXITY IN SUSTAINABILITY

Problem Framing

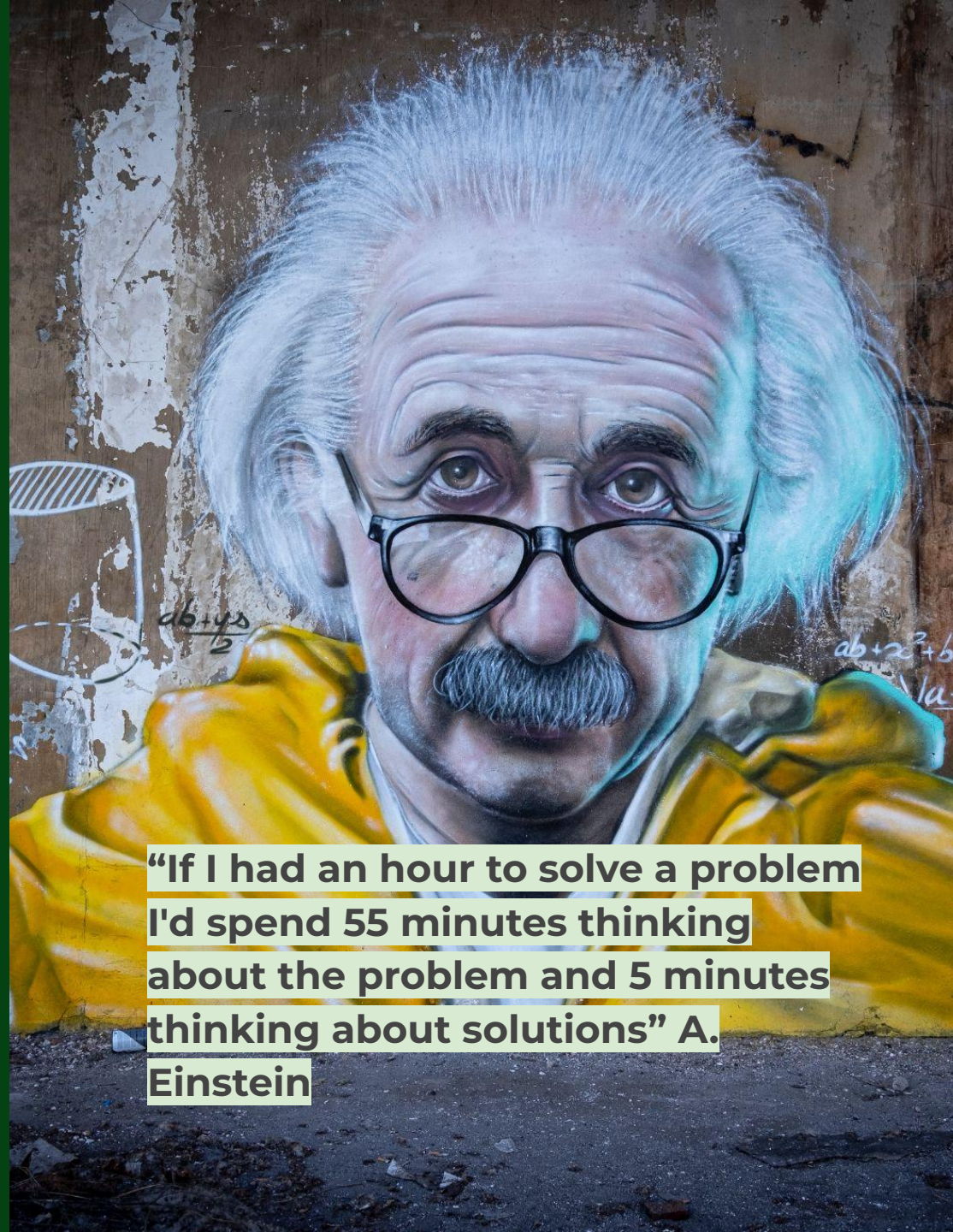
Problem framing refers to the process of defining and structuring a problem in a clear and meaningful way. It involves identifying and understanding the core elements and dimensions of a problem, including its causes, impacts, and potential solutions. Problem framing sets the stage for effective problem-solving by providing a clear understanding of what needs to be addressed and how it relates to the broader context.

Problem Framing

Why is important?

The key reasons why problem framing is important:

- Helps professionals in the green economy identify and define the most pressing sustainability challenges.
- Enables professionals to develop comprehensive solutions that address the underlying causes and interconnectedness of sustainability challenges.
- Encourages professionals to consider the long-term implications of their actions and solutions.
- Facilitates effective stakeholder engagement and collaboration in the green economy.
- Helps professionals optimize the use of resources in the green economy.



Problem framing

Knowledge, skills and attitudes.

Knows sustainability claims without robust evidence are often mere communication strategies, also known as greenwashing;

Can analyse and assess arguments, ideas,
actions and scenarios to determine whether they
are in line with evidence and values in terms of sustainability.

Trusts science even when lacking some of the knowledge required to fully understand scientific claims.

ENVISIONING SUSTAINABLE FUTURES

I: Future literacy

II: Adaptability

III: Exploratory thinking

ENVISIONING SUSTAINABLE FUTURES

Future literacy

Future literacy is a concept that refers to the ability to understand, navigate, and shape the future. It is a set of skills and capacities that enable individuals, organizations, and societies to anticipate and respond effectively to the challenges and opportunities of an uncertain and rapidly changing world. Futures literacy aims to empower learners to create their visions for a sustainable future by providing them with the knowledge, skills and attitudes to understand the futures as a variety of alternatives.

Future Literacy

Why is important?

Building a sustainable future is essential for the well-being of people, the planet, and future generations. It requires us to rethink our current practices, make conscious choices, and take collective action to ensure a prosperous future for all.

Anticipation and Adaptation

Future literacy helps anticipate sustainability challenges and opportunities, enabling proactive measures and timely adaptation to changes.

Innovative solutions

It fosters creativity, allowing individuals to develop innovative technologies, practices, and policies that promote sustainable development.

Strategic planning

It enhances long-term strategic planning, helping organizations create resilient strategies that consider future scenarios and ensure sustainable growth.

Future literacy

Knowledge, skills and attitudes.

Knows the difference between expected, preferred and alternative futures for sustainability scenarios;

Can envisage alternative futures for sustainability that are grounded in science, creativity and values for sustainability;

Is aware that the projected consequences on self and community may influence preferences for certain scenarios above others.

ENVISIONING SUSTAINABLE FUTURES

Adaptability

Adaptability is about being flexible and able to adapt to new situations and adjust to accommodate changes in our complex world. It is essential that individuals cope with uncertainty about the future and the ambiguity of wicked sustainability problems and how they may evolve.

It encompasses the goal of creating a balanced and thriving society, economy, and environment, while also addressing the challenges of climate change, resource depletion, social equity, and more. Given the complex and rapidly changing nature of sustainability issues, adaptability plays a significant role in achieving sustainable outcomes.

Adaptability

Importance

Responding to Change

Adaptable individuals and organizations can adjust their strategies and practices to address emerging sustainability challenges, such as climate change impacts, policy changes, market shifts, or technological advancements.

Embracing Innovation

Adaptable individuals are more open to new ideas and technologies, allowing them to embrace innovative solutions and contribute to sustainable development. They can adapt to and adopt emerging sustainable practices, technologies, and business models.

Systems Thinking

Adaptable individuals understand the interconnectedness and interdependencies of various sustainability issues. They can analyze complex systems and recognize the potential impacts and unintended consequences of their actions.

Adaptability

Knowledge, skills and attitudes.

Knows that human actions may have unpredictable, uncertain and complex consequences for the environment;

Can take into account local circumstances when dealing with sustainability issues and opportunities;

Is willing to discontinue unsustainable practices and try alternative solutions.

ENVISIONING SUSTAINABLE FUTURES

Exploratory thinking

Exploratory thinking refers to an approach or mindset that encourages the exploration of innovative ideas, solutions, and possibilities to address sustainability challenges. It involves questioning the status quo, challenging conventional thinking, and seeking new ways to promote environmental, social, and economic sustainability.

Exploratory Thinking

Why is important?

In the context of sustainability, exploratory thinking plays a vital role in addressing the intricate challenges we face.

Drives innovation

It allows us to delve deeper into the underlying causes of environmental, social, and economic issues and explore new avenues for solutions

Encourage collaboration

Recognizing that sustainability challenges require collective efforts, exploratory thinking encourages collaboration among diverse stakeholders

Fosters adaptation

By adopting an exploratory mindset, we can stay informed about emerging trends and be proactive in adapting our strategies and actions to address new challenges and opportunities.

Empowers individuals and organizations

To actively shape a more sustainable world.

Exploratory thinking

Knowledge, skills and attitudes.

Knows that sustainability problems must be tackled by combining different disciplines, knowledge cultures and divergent views to initiate systemic change.

Can synthesise sustainability-related information and data from different disciplines.

Is committed to considering sustainability challenges and opportunities from different angles.

ACTING FOR SUSTAINABILITY

I: Political agency

II: Collective action

III: Individual initiative

ACTING FOR SUSTAINABILITY

Political agency

Political agency is the capacity to positively influence the collective future, by mobilising those at political level to take action for change. Political agency requires the capacity to analyse the context, spot possible avenues to move the sustainability agenda forward, and identify key stakeholders that can be brought on board to help achieve sustainability.

Political agency

Why is important?

Effective participation

Helps you engage in political processes to influence sustainability policies.

Accountability

Ensures politicians are held responsible for unsustainable actions.

Advocacy

Enables you to support and demand effective sustainability policies.

Political agency

Knowledge, skills and attitudes.

Knows policies that assign responsibility for environmental damage (e.g. ‘polluter pays’).

Can identify relevant social, political and economic stakeholders in one’s own community and region to address a sustainability problem.

Demands political accountability for unsustainable behaviour.

ACTING FOR SUSTAINABILITY

Collective action

Collective action involves bringing together different perspectives, expertise, and resources to foster synergistic solutions and maximize the impact of sustainability initiatives. It often involves partnerships, alliances, networks, and multi-stakeholder platforms where participants share knowledge, pool resources, and collaborate on common goals.

Collective action

Why is important?

Collaboration and partnership

Sustainable development requires collaboration and partnerships among various stakeholders, including governments, civil society organizations, businesses, and individuals.

Shared responsibility

Sustainable development is a shared responsibility that transcends national borders.

Scaling up impact

Many sustainability challenges, such as climate change, deforestation, and poverty, are systemic and interconnected.

Knowledge sharing and learning

Collective action provides opportunities for knowledge sharing, learning, and capacity building.

Mobilizing resources

Sustainable development requires significant financial, technological, and human resources.

Collective action

Knowledge, skills and attitudes.

Knows how to work with diverse participants to create inclusive visions for a more sustainable future;

Can create transparent, inclusive and community-driven processes;

Is willing to engage with others to challenge the status quo.

ACTING FOR SUSTAINABILITY

Individual initiative

Basically, "individual initiatives" refer to any actions of an individual that can be implemented in their personal behavior and contribute to the formation of sustainable thinking and attitudes.

Individual initiative

Why is important?

Innovation and entrepreneurship

Individual initiative encourages innovation and entrepreneurship, which are vital for sustainable development.

Awareness and education

Individuals who take the initiative to educate themselves and raise awareness about sustainability issues can have a significant impact on their communities and beyond.

Sustainable lifestyles

Sustainable development requires a shift in individual behaviors and lifestyles. By taking the initiative to adopt sustainable practices in their daily lives, individuals can significantly reduce their ecological footprint.

Collaboration and networking

Individual initiatives can lead to collaboration and networking among like-minded individuals, organizations, and communities.

Individual Initiative

Knowledge, skills and attitudes.

Knows that preventive action should be taken when certain actions or inaction may damage human health and all life forms (precautionary principle).

Can act promptly, even in the face of uncertainty and unforeseen events, keeping in mind the precautionary principle.

Is confident about anticipating and influencing sustainable changes.

Greening of labor market

Climate Change in Europe

Climate change poses various dangers to Europe due to its **geographical, ecological** and **socio-economic** characteristics. Some of the key reasons why Climate Change is considered dangerous include:

- **Rising Temperatures**
- **Extreme Weather Events**
- **Impact on Ecosystems and Biodiversity**
- **Water Scarcity**
- **Migration and Displacement**

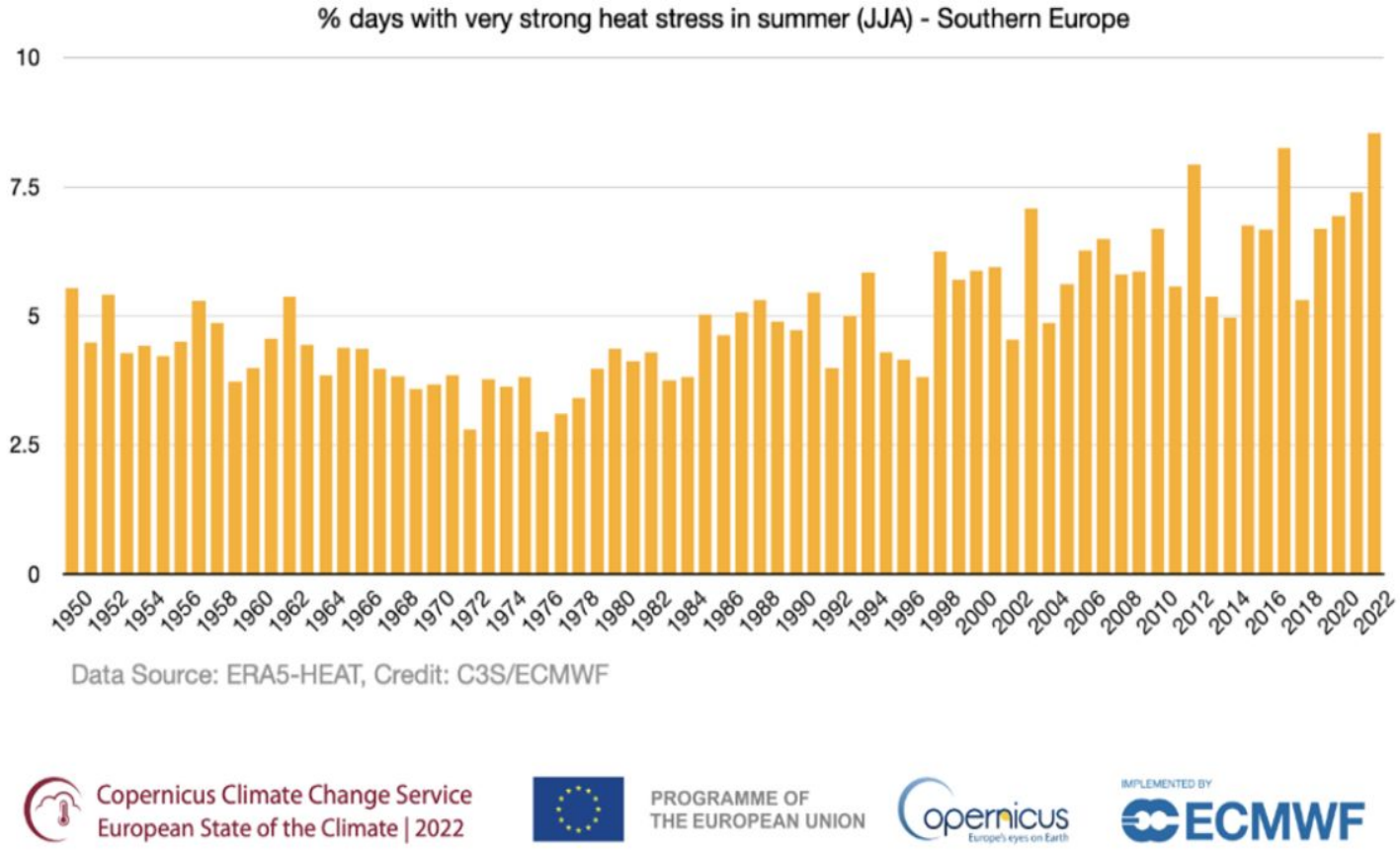
Extreme weather events like storms, heatwaves and flooding accounted for **85,000 to 145,000 human fatalities** across Europe, over the past 40 years. **Over 85%** of those fatalities were due to heatwaves.

Economic losses from weather and climate-related extremes in Europe reached around **half a trillion euros** over the same period.

Source: *European Environment Agency (EEA)*

The European Scenario

The graphic clearly shows how days with very strong heat stress have almost doubled since 1950



Percentage of days during summer with 'very strong heat stress' (UTCI between 38 and 46°C) in southern Europe, from 1950 to 2022. Data source: ERA5-HEAT. Credit C3S/ECMWF.

How is Europe tackling Climate Change?

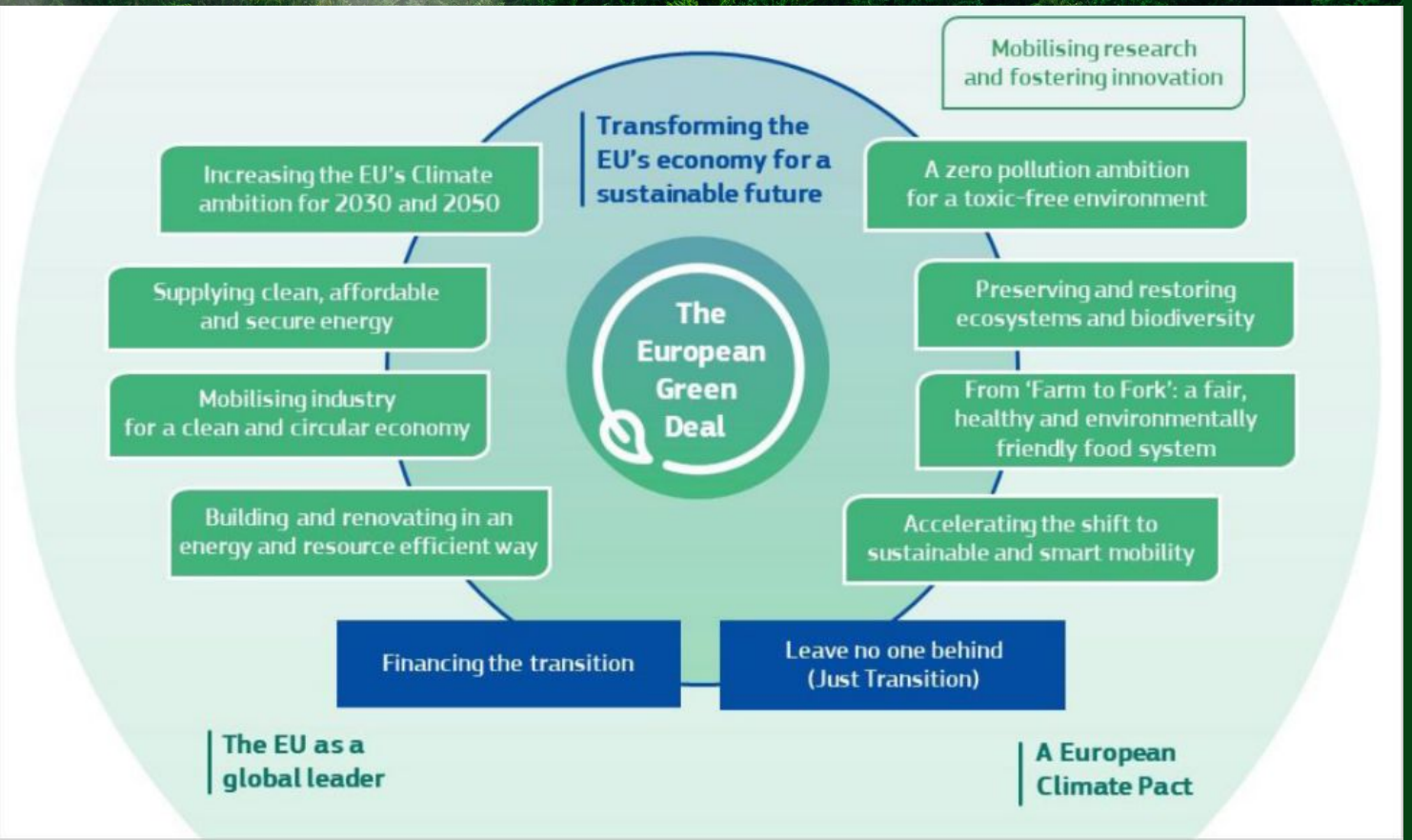
The European Green Deal

The EU Green Deal was approved in 2020 by the European commission as a set of policy initiatives aiming to make the **EU climate neutral by 2050.**

It functions as a large umbrella covering several sectors, relying on multiple instruments to achieve its goals and covering **8 sectors:**

1. **Climate**
2. **Energy**
3. **Industry & the circular economy**
4. **Buildings and their renovation**
5. **Pollution**
6. **Ecosystem and biodiversity**
7. **Agriculture and the food system**
8. **Mobility**

How it works



- Beyond identifying these essential areas to tackle climate change, the Green Deal also introduces a new trend: **from now on, sustainability and the environment must be taken into account in all EU activities**.

- Sectors as diverse as **finance and investment**, **national budgets, research or education** will have to pay more attention to climate change. Scientific research and innovation will play a central role in this transformation. **The EU needs new technologies and developments to realise the goal of the Green Deal**. If our current lifestyle is damaging the environment, then we need a new lifestyle.

- In this context **Green Jobs** have become increasingly important, making essential the development of new competences and the updating of the obsolete ones.

Defining Green Jobs

There is no single definition for the term "green job", although there is wide consensus that they should have a positive impact on the environment while creating economic growth. ***For Example:***

The United Nations Environment Programme (UNEP) defines green jobs as "positions in agriculture, manufacturing, R&D, administrative, and service activities aimed at substantially preserving or restoring environmental quality".

The International Labour Organization (ILO) provides another international definition of green job, saying "They reduce the consumption of energy and raw materials, limit greenhouse gas emissions, minimize waste and pollution, protect and restore ecosystems and enable enterprises and communities to adapt to climate change. To summarise, Green Jobs contribute to:

- **Improve energy and raw materials efficiency**
- **Limit greenhouse gas emissions**
- **Minimise waste and pollution**
- **Protect and restore ecosystems**
- **Support adaptation to the effects of climate change**

Examples of Green Jobs

There are many different career options in the Sustainability and Green Jobs industry. The diversity of this field makes it incredibly flexibility, allowing people from many different backgrounds and education levels to get into sustainability.

Green Jobs include:

- Agroforest
- Aquarist
- Biofuel Production Operator
- Director Sustainability
- Energy Manager
- Geophysical Engineer
- Hydrographic Surveyor
- Nuclear Engineer
- Petrologist
- Solar Engineer
- Sustainability Specialist
- Water Resource Engineer
- Watershed Science Technician
- Wind Energy Engineer
- Air Quality Forecaster
- Aquatic Biologist
- Chemical Engineer
- Ecoturism Guide
- Environmental Public Relations Specialist
- Geoscientist
- Landscape Architect
- Petroleum Engineer
- Soil Conservation Technician
- Sustainability Program Coordinator
- Turf Scientist
- Watershed manager
- Wetland Specialist
- Zoning Technician

Understanding Green Skills

In light of the previous discussed concepts on green jobs, green skills can be defined as the knowledge, abilities, values and attitudes needed to live in, develop and support a sustainable and resource-efficient society.

As marked by the objectives of the European Green Deal, they are at the core to make the transition to a low-carbon realistic by 2050.

There are three main ways in which the transition to a green economy affects needed skills:

- Structural changes lead to increased demand for some tasks and a decrease for others;
- New economic activity will create new occupations and there will be a need for new skills profiles, qualifications and training frameworks;
- Many existing occupations and industries will experience greening changes to tasks within their jobs, and this will require adjustments to the current training and qualification frameworks for these occupations.

Green Skills by sector

Engineering and technical skills

Hard skills encompassing competences involved with the design, construction and assessment of technology usually mastered by engineers and technicians.

This know-how is needed for eco-buildings, renewable energy design and energy-saving research and development (R&D) projects.

Science skills

Competences stemming from bodies of knowledge broad in scope and essential to innovation activities, for example physics and biology.

These skills are especially in high demand in each stage of value chains and in the utility sector, which provides basic amenities such as water, sewage services and electricity.

Operation management skills

Know-how related to change in organizational structure required to support green activities and an integrated view of the firm through life-cycle management, lean production and cooperation with external actors, including customers.

Such skills are important, for example, for sales engineers, climate change analysts, sustainability specialists, chief sustainability officers and transportation planners.

Monitoring skills

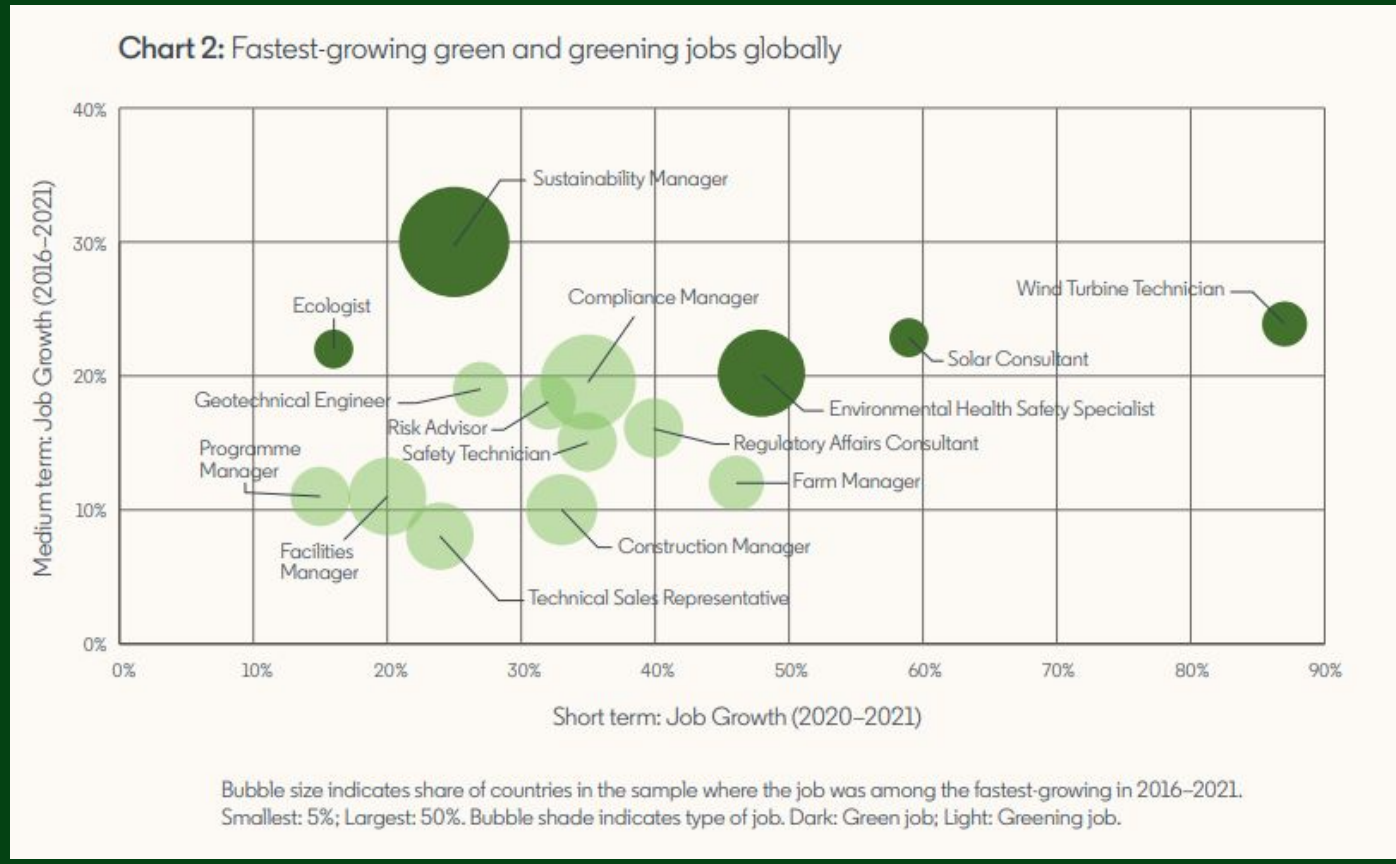
Technical and legal aspects of business activities that are fundamentally different way from the remit of engineering or of science. They refer to skills required to assess the observance of technical criteria and legal standards.

Examples are environmental compliance inspectors, nuclear monitoring technicians, emergency management directors and legal assistants.

Fastest growing jobs

Chart 2 shows that the top five fastest growing green jobs between 2016 and 2021, in terms of annual growth, are Sustainability Manager (30%), Wind Turbine Technician (24%), Solar Consultant (23%), Ecologist (22%), and Environmental Health and Safety Specialist (20%). The fastest-growing greening jobs, moreover, are less specialised and are found in a variety of sectors — including roles that range from Compliance Manager (19%) to Facilities Manager (11%) and Technical Sales Representative (8%).

Source: Global Green Skills Report 2022 - LinkedIn



Funded by the European Union

CEIPES

KYIV BUSINESS SCHOOL

Fundacja Marki Polskiej im. prof. Witolda Kieżun

Education Centre "Socialization"

Project GYW

GYW

2022-1-PL01-KA220-YOU-000085715

What are the trends?

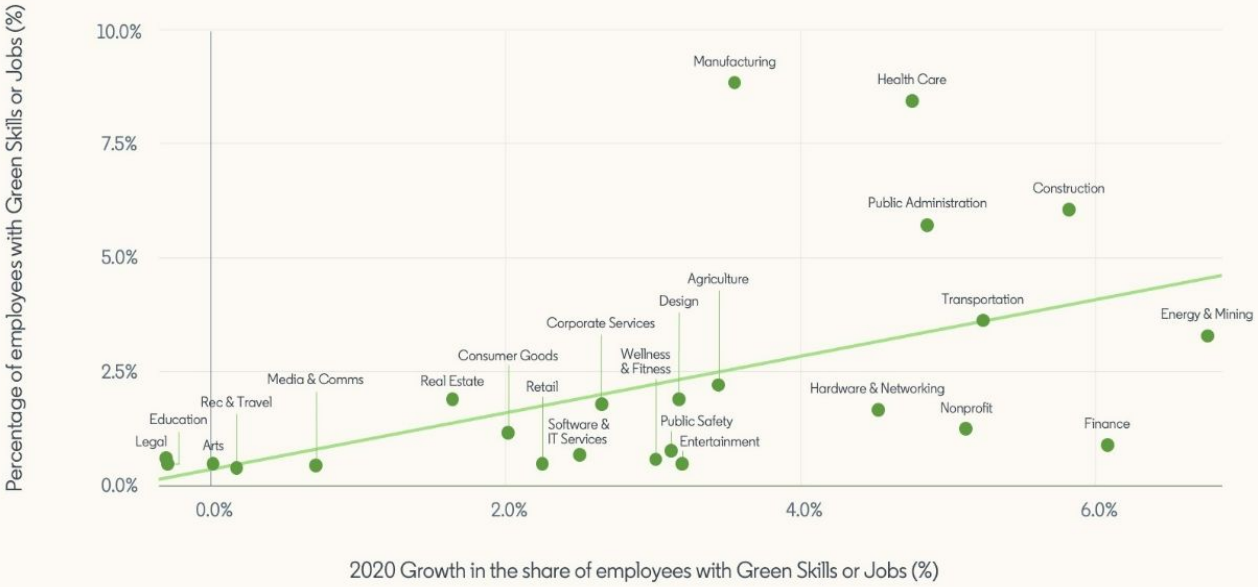
The **2021-27 EU budget** and the Next Generation EU fund will allocate over **1.8 trillion euros** to support the EU policies and the recovery in 2021-27, with 30% on climate and environment.

It therefore means that forecasts have already begun to outline how the sectors covered by the EGD will perform in terms of growth.

For instance, in 2017, the environmental economy generated 698 billion euros output and **287 billion euros** value added, **2.2% of GDP.**

To give some insights, Cedefop has conducted several scenarios analysis forecasting the impacts of the **European Green Deal on the job market**, divided by sectors in which the transition will be more consistent.

Green Skills growing across most industries



Source: World Economic Forum