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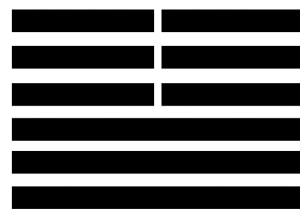
CEIPES



Project GYW

2022-1-PL01-KA220-YOU-000085715

E-course “Green Skills for successful employment and work in the process of the transition to a more ‘green’ and environmentally sustainable economy” for young people at risk of marginalization



Education Centre "Socialization"

Module V

MODULE I

Learning Objectives

This section discusses the main concepts related to the greening of the labour market, such as green skills and green jobs, and their role in achieving the objectives set out in the European Green Deal. It also provides examples of green occupations and skills useful in the green labour market, as well as the latest trends in the field.

Greening of Labour Market

Introduction

The Greening of the Labour Market

In March 2020 The European Commission adopted the new circular economy action plan (CEAP) as one of the main building blocks of the European Green Deal. The aim of the move is to foster an economic transition that reduce pressure on natural resources to create sustainable growth and jobs. It is also a prerequisite to achieve the EU's 2050 climate neutrality target and to halt biodiversity loss(1).

The circular economy (also known as CE) refers to a model of production and consumption, which involves sharing, leasing, reusing, repairing, refurbishing, and recycling existing materials and products as long as possible (2). The advantage is that, contrarily to the conventional model that most of the world's economy used until recent times, also referred to as linear economy (take, make, waste), circularity allows to produce a model in which nothing gets wasted, therefore contributing to minimize emissions and consumption of raw materials, increase the sustainability of consumption and improve resource management. Implicitly, it largely helps creating new jobs paths and careers and putting an added value compared to the practices conventionally applied in linear economic models.



To take advantage of and keep up with the employment and innovation potential of the circular economy, there is an urgent need to spread the right information about the evolution of the required skills needed in the green sector.

Greening of Labour Market

Introduction

Moving towards a more circular economy could deliver benefits such as reducing pressure on the environment, improving the security of the supply of raw materials, increasing competitiveness, stimulating innovation, boosting economic growth (an additional 0.5% of gross domestic product) - creating 700,000 jobs in the EU alone by 2030. (3)

In this context, there is wide consensus that not only the formal education, but also the role of Vocational and Educational Training will be a crucial one in fully achieving the transition to the green economy set by the European Green Deal standards. In line with this, governments have been encouraged to implement policy changes to improve opportunities for professional and lifelong learning progression and enhance VET's permeability and quality in order to make it more attractive to learners.(4)

The skills needed for adapting to the new circular economy practices vary across disciplines and curricula, from business administration, to logistics, agriculture and food sciences, as well as within informal learning. Some education providers, mostly within higher education, provide learning offerings that explicitly reference circular strategies. Most of these offerings occur in the context of sustainability studies, engineering, and business.(5) However, teaching the skills and mindsets needed to reduce waste, close material cycles and address issues such as climate change, biodiversity loss and social cohesion, should be considered crucial ways to raise awareness in contributing to the circularity paradigm.

Greening of Labour Market

Introduction

Although the word “green” often evoke an idea strictly related to science, this narrow view does not accurately represent the diversity of the possible several applications of the green sector. While a scientific career is certainly a part of the industry, there are many other options for those seeking a green profession. In fact, many Sustainability careers are often focused on helping organizations and companies run more efficiently, thereby increasing their profits, pleasing their customer base, and creating a sense of wellbeing and usefulness among the community. Here are just some of the examples of possible career paths that nowadays are making their way in the Europe’s working landscape:

- Agroforester
- 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
- Ecotourism Guide
- Environmental Public Relations Specialist
- Geoscientist
- Landscape Architect
- Petroleum Engineer
- Soil Conservation Technician
- Sustainability Program Coordinator
- Turf Scientist
- Watershed Manager
- Wetland Specialist
- Zoning Technician

Greening of Labour Market

Introduction

Useful competences in the Green Skills Market

Green competences refer to the skills, knowledge, and attitudes that are related to environmental sustainability and the protection of natural resources. here are a variety of competencies that are necessary for green jobs, including:

Knowledge of environmental sustainability principles: This includes understanding the impacts of human activities on the environment, as well as knowledge of how to mitigate these impacts through sustainable practices.

Technical skills: Many green jobs require specific technical skills, such as knowledge of renewable energy technologies or expertise in sustainable agriculture practices.

Communication skills: Green jobs often involve working with diverse stakeholders, including the public, government agencies, and private businesses. Strong communication skills are therefore essential for effectively communicating information and ideas related to environmental sustainability.

Problem-solving skills: Green jobs often involve finding creative solutions to complex environmental problems, so strong problem-solving skills are important.

Leadership skills: Green jobs often involve leading teams or projects focused on sustainability, so strong leadership skills are important for effectively guiding and motivating others.

Greening of Labour Market

Introduction

In order to skill, upskill and reskill the our community in green jobs, it is important to provide them with opportunities to learn about these competencies through education and training programs. This may include formal high school or post-secondary education programs and on-the-job training and experiential learning opportunities. It is also important to provide support and resources to help young people develop the necessary skills and knowledge to succeed in green jobs.

The following slides are going to explore the above-mentioned competences to be applied to the sustainability sector, and will be associated with some of the jobs currently associated with them. Finally, a section on how to build a CV highlighting the green skills possessed will be included, and individuals are encouraged to prepare their CV and navigate the green market.



| 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.

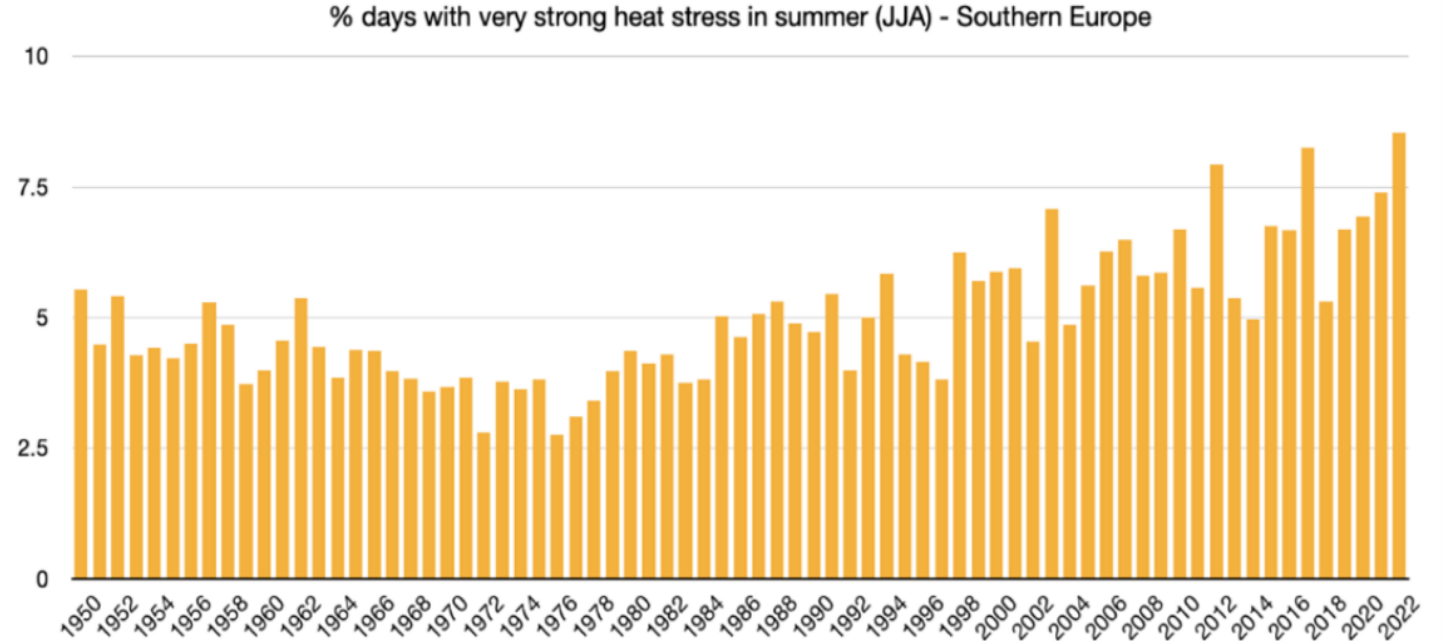
Economic losses from weather and climate-related extremes in Europe reached around **half a trillion euros** over the same period.

Source: [European Environment Agency \(EEA\)](#)



The European Scenario

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



Data Source: ERA5-HEAT, Credit: C3S/ECMWF



PROGRAMME OF THE EUROPEAN UNION



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

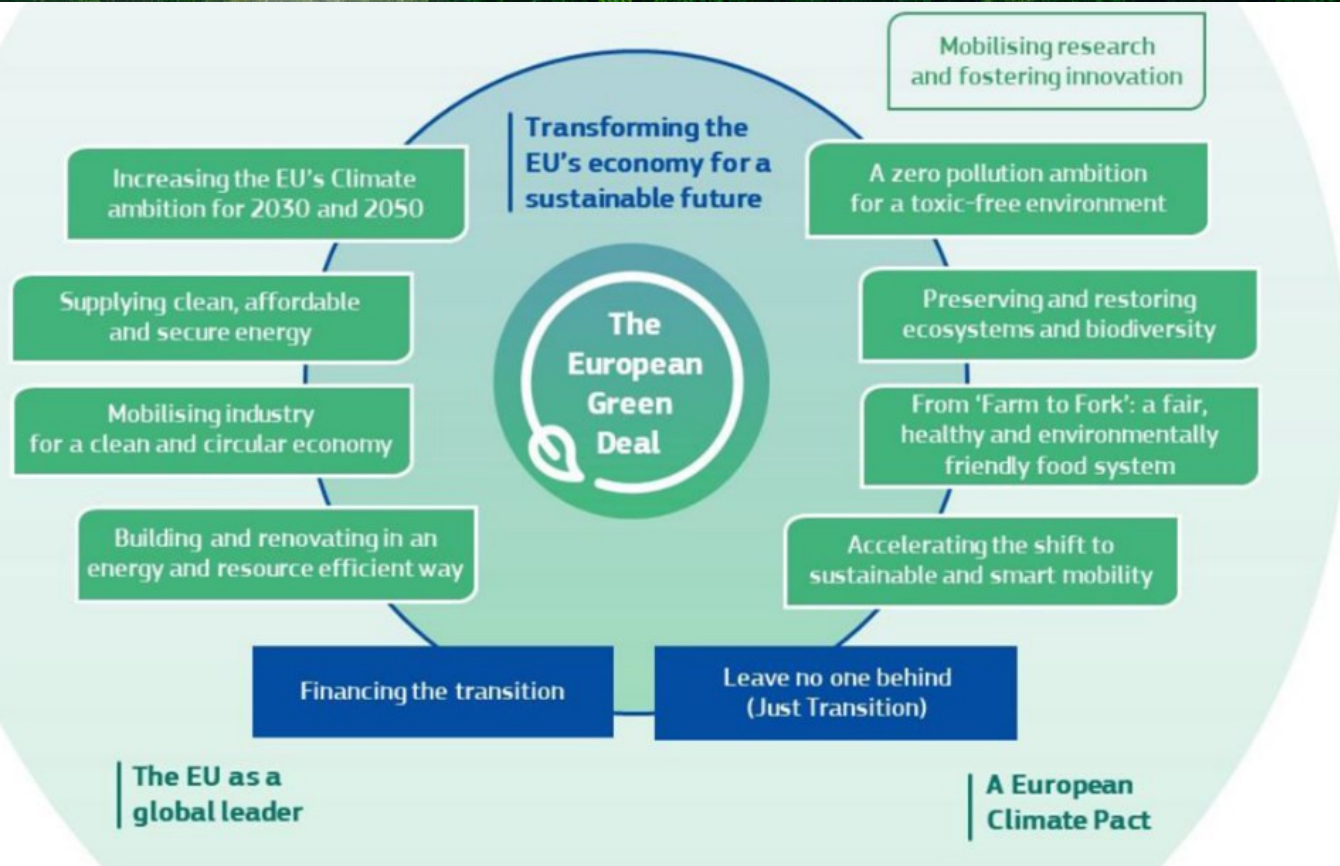
The EU Green Deal was approved in 2020 by the European Commission as a set of policy initiatives aiming to make the **EU climate neutral by 2050**.

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:

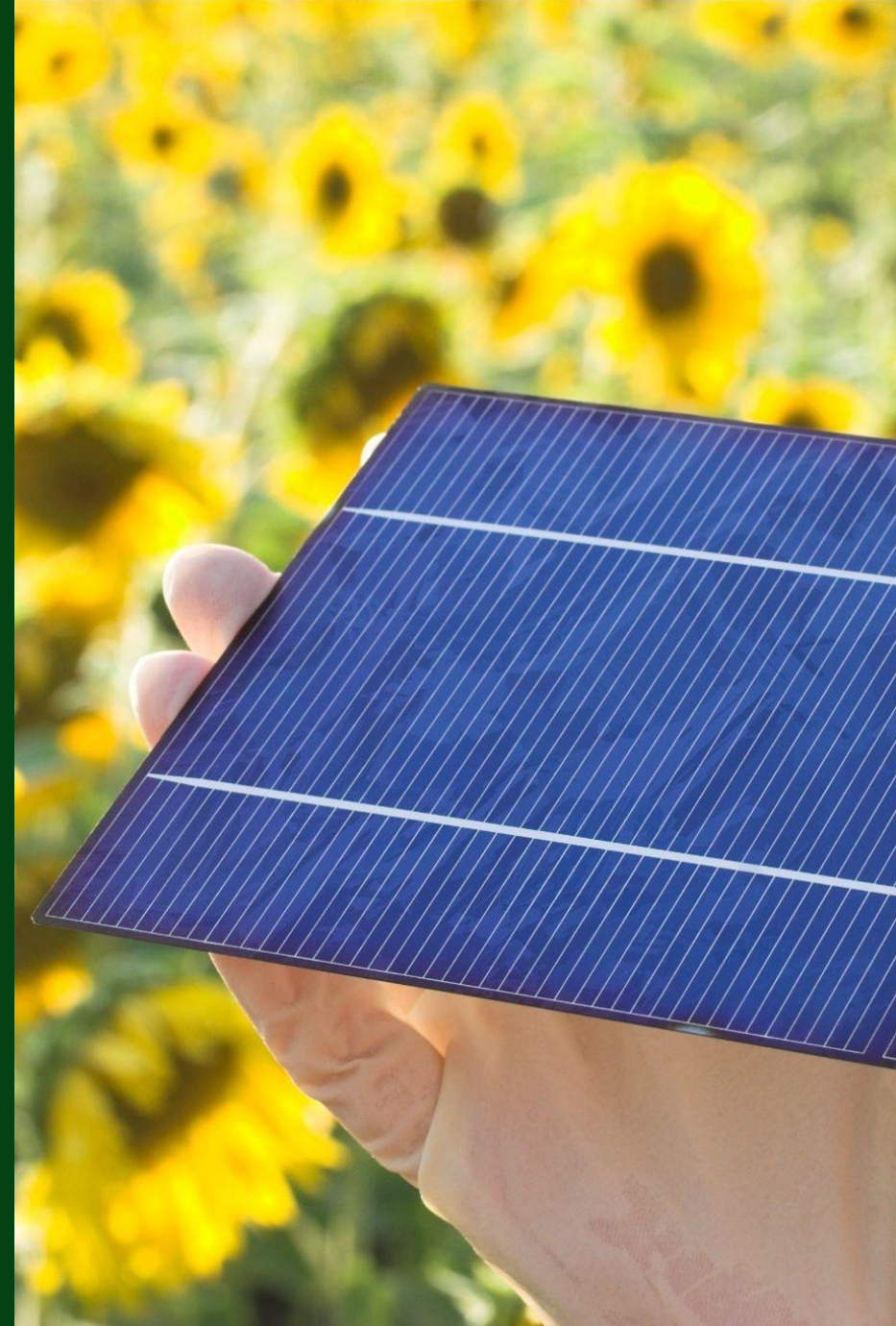
- **Improve energy and raw materials efficiency**
- **Limit greenhouse gas emissions**
- **Minimise waste and pollution**
- **Protect and restore ecosystems**
- **Support adaptation to the effects of climate change**

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
- Ecotourism Guide
- Environmental Public Relations Specialist
- Geoscientist
- Landscape Architect
- Petroleum Engineer
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What are the trends?

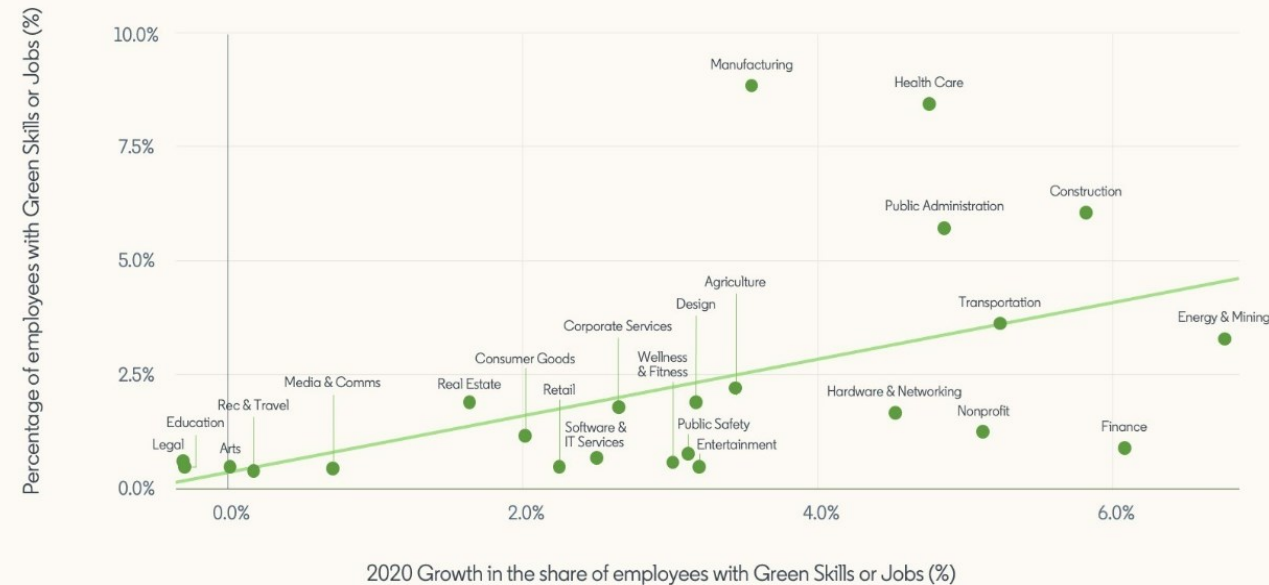
The **2021-27 EU budget** and the Next Generation EU fund will allocate over **1.8 trillion euros** to support the EU policies and the recovery in 2021-27, with 30% on climate and environment.

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](#)

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

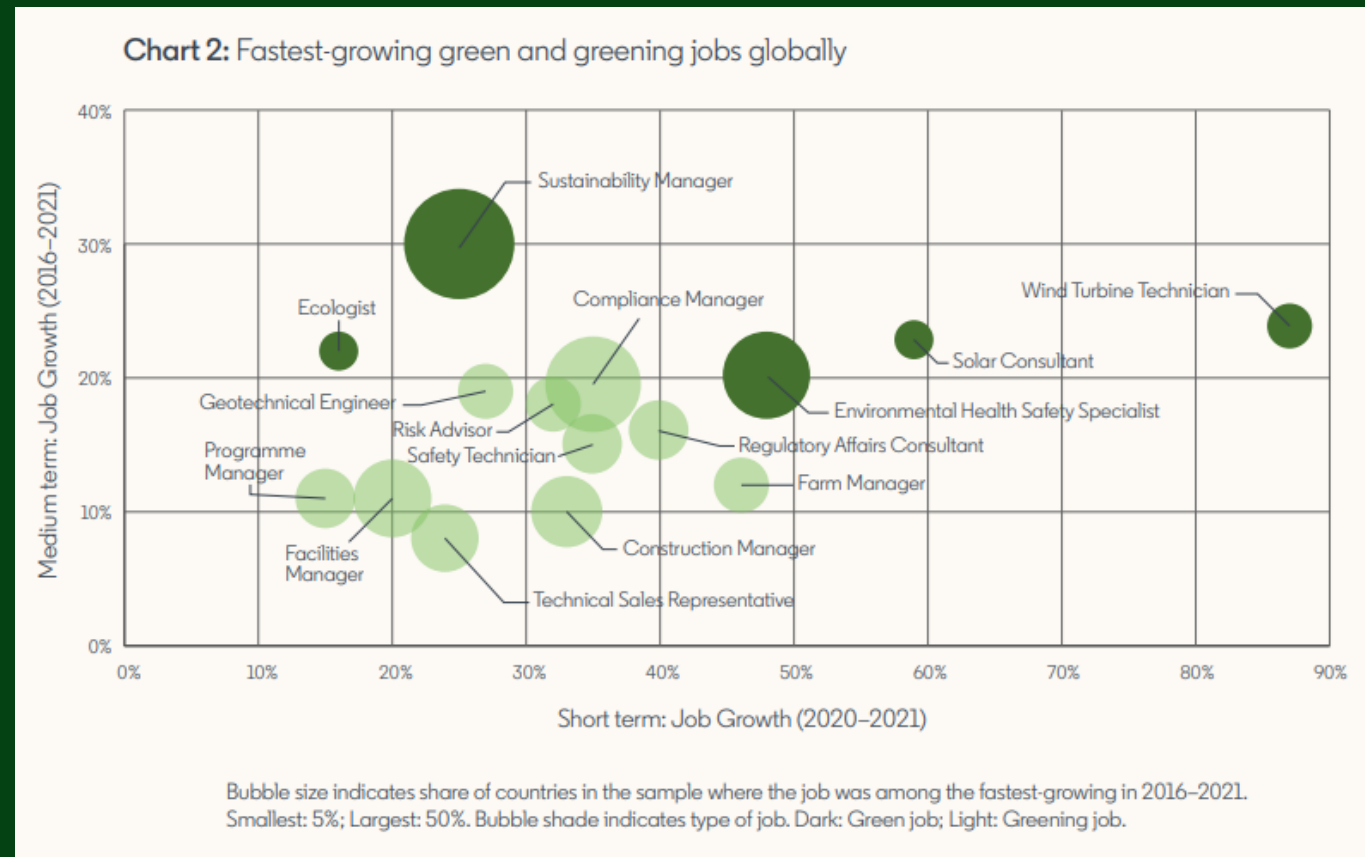
Technical and legal aspects of business activities that are fundamentally different way from the remit of engineering or of science. They refer to skills required to assess the observance of technical criteria and legal standards.

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



Workshop on Green Jobs

Purpose of the workshop

The workshop's goal is to improve understanding of existing green work professions and what they entail. Participants will learn about the role of green jobs in the fight against climate change.

Link: <https://drive.google.com/drive/folders/1tEc6sUeJyCsE0RcikdYd17-5xoFBelCu>

Greening of Labour Market

Self-assessment of knowledge after the course

What are Green Skills?

- a) Skills related to gardening and horticulture
- b) Skills focused on accounting and finance
- c) Skills for energy-efficient technology development

Which of the following areas are commonly associated with Green Skills?

- a) Renewable energy technologies
- b) Sustainable agriculture
- c) Environmental management and assessment
- d) All of the above

How do Green Skills contribute to sustainability?

- a) By promoting biodiversity conservation
- b) By addressing climate change challenges
- c) By worsening environmental impact

True or False: Green Skills are only relevant for environmental careers.

- a) True
- b) False

Greening of Labour Market

Self-assessment of knowledge after the course

Which of the following is an example of a specific Green Skill?

- a) Solar panel installation
- b) Web development
- c) Accounting
- d) Graphic design

How can individuals acquire Green Skills?

- a) Through formal education and training programs
- b) Through on-the-job experience and apprenticeships
- c) Through self-study and online courses
- d) All of the above

True or False: Green Skills are becoming increasingly important in the job market.

- a) True
- b) False

How do Green Skills contribute to mitigating climate change?

- a) By promoting energy efficiency
- b) By supporting the use of renewable energy sources
- c) By advocating for private-only transportation options
- d) They help to raise money to be used only for profit purposes

Greening of Labour Market

Self-assessment of knowledge after the course

Which of the following is a benefit of integrating Green Skills in organizations?

- a) Cost savings through energy efficiency measures
- b) Improved corporate social responsibility
- c) Enhanced reputation and customer appeal
- d) All of the above

Do you believe that incorporating Green Skills into educational curricula is essential? Why or why not? Give a short open answer

Workshop

Green Work 4 Youth

ACTIVITY 1: What are green jobs and why are they important

Duration: 60-90 minutes

Number of participants: 25

Purpose of the workshop:

The workshop's goal is to improve understanding of existing green work professions and what they entail. Participants will learn about the role of green jobs in the fight against climate change.

Workshop Agenda:

In the **theoretical part**, the trainer will start with an open discussion about what sustainability is and how it can be applied across the board. Next, the educator will play a video titled "What is a Green Job?" and explain to participants the topic of green jobs. In the **practical part**, students will be divided into two teams. They will draw lots from three empty cups filled with 26 green jobs. Participants will have to describe their picked-up jobs to receive points. Lastly, students will have to sign up on LinkedIn and search for the professions that were most interesting to them during the previous activity.

Required tools:

- Room with projector
- Students should have access to their own laptops or mobile phones
- For the activities, cards with 26 green jobs (Green Jobs Working Material) and tree cups will be needed - see *Activity no. 1 folder*
- What is a Green Job? Friends of the Earth - see *Bibliography at the end*

Workshop

Green Jobs

Activity Description:

1.Introduction (15 min)

The introduction will contain a presentation by participants and an open debate about what sustainability is and how it may be implemented transversally.

2.Projection of the Green Jobs videos and comments (10 min)

The trainer will play a video of The Green Jobs created by Friends of the Earth and give a more accurate description of what is meant by green job. The trainer will also use the first section of the methodological handbook.

3.Guess the Green Job (45 min)

The trainer will prepare three empty cups and miniature cards with 26 green jobs on them to illustrate the jobs' economic, environmental, and social focuses.

First phase:

Students will be split into two teams, and each team member will be required to give a brief explanation of the duty they were assigned. The team member will be able to gain points for the team and learn the wage range of the position (derived from Italian statistics as a European average) by providing a more accurate definition, which the trainer will have in a separate paper.

Workshop

Green Work 4 Youth

Second phase:

The second phase will only include 10 of the 26 previously mentioned green jobs for each team. Once again, this template calls for a thorough description of the job and the completion of a tiny section detailing the environmental benefits of that green job.

Last phase:

The third and final stage will be an exploration period for the entire class using a personal digital tool. Students will be encouraged to sign up for a LinkedIn account and conduct a search for the career in which they are most interested. In order to learn more about the actual difficulties and duties of that particular green employment, they will also be urged to add that professional on LinkedIn.

4. Feedback and discussion at the end (10 min)

At the conclusion, there will be debate and feedback.

The facilitator will guide the group in a debriefing session on the consequences of their activity and on assessing the data.

ACTIVITY 1:

<https://www.youtube.com/watch?v=bAbuP-FwwY>