

MODULE 1: Introduction to Green Skills and Sustainable Development

“Green Job Growth”

Small-scale partnership in the field of youth

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ABOUT THE PROJECT

“Green Job Growth” (GJG), a project co-funded by the Erasmus+ Programme, is a 18-month initiative committed to fostering sustainable development and youth employment across Europe.

Coordinated by Bridging Europe in Germany and in collaboration with Amici di Puck (Italy) and Go Green (Spain), this project addresses the urgent need for promoting green skills among young people and facilitating their entry into the green economy.



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PROJECT CONSORTIUM





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I. Introduction

The present circumstances of our planet are at an important turning point, confronting unprecedented environmental challenges that threaten the fundamental structure of our global ecosystem. The issues of climate change, biodiversity loss, and decreasing resources are not simply distant worries, but rather pressing realities that demand immediate response. Within this specific context, the significance of youth workers becomes ever more important. As mentors and role models, they hold a prominent place in influencing the development of young minds and professional careers.

The main goal of this first module is to fully engage youth workers in the fundamental ideas of sustainable development. We aim to comprehend the complex components of this concept, not only as a necessity for the environment but also as a comprehensive strategy that harmonizes ecological, economic, and social aspects. Our objective is to ensure that youth workers and readers in general are adequately prepared to mentor the future generation in understanding and valuing green skills - abilities that are becoming increasingly important in a workforce that is always adapting to meet the demands of our planet.

Our first step is creating an in-depth picture of the worldwide environmental crisis. This part will guide learners in a thorough review of the most urgent challenges that our planet confronts, encompassing climate change, degradation of the environment, and limited availability of resources. Through understanding these obstacles, we can more fully grasp the importance of promptly shifting towards sustainable activities.

Afterwards, we explore the core components that define green skills. These abilities are not limited to technical skills specific to environmental tasks, but also include a wider range of capabilities that are increasingly appreciated in various industries. We will examine the importance of these skills in fostering innovation, facilitating sustainable business practices, and strengthening a robust economy.

Ultimately, we will introduce the United Nations Sustainable Development Goals to youth workers. These goals serve as an all-encompassing plan on a worldwide scale for promoting dignity, peace, and prosperity for both individuals and the environment, both presently and in the future.

By the end of this module, youth workers will have a rich understanding of the critical importance of green skills in today's workforce and the global movement towards sustainable development. We hope that this knowledge will not only enhance their professional expertise but will also enable them to make a significant and positive impact in the lives of young people and, consequently, on the health and sustainability of our planet.



II. Overview of global environmental challenges

As we begin our exploration of sustainable development, it is crucial to recognize that there are many different environmental concerns that our planet faces. These issues highlight the urgent requirement for a transition towards sustainability and emphasize the significance of green skills in facilitating this change. Now, let's explore some of the major worldwide environmental issues that influence our present circumstances and future possibilities.

- **Climate Change**

Climate change is the most urgent environmental issue of our century, encompassing major and permanent alterations in global temperatures and weather patterns. Although natural factors like solar cycle fluctuations can contribute to these changes, human actions, particularly the combustion of fossil fuels such as coal, oil, and gas, have been the main driver since the 1800s. This process of combustion emits greenhouse gases, such as carbon dioxide, methane, and nitrous oxide, into the Earth's atmosphere. These gases, known as greenhouse gases, capture and retain heat from the sun, resulting in a phenomenon called the greenhouse effect, which in turn causes global warming. Activities such as deforestation intensify this effect by decreasing the quantity of trees capable of absorbing carbon dioxide.



Source: <https://pixabay.com/es/images/search/climate%20change/>

The effects of climate change are varied and extensive. It contributes to weather patterns, resulting in increased occurrence and severity of phenomena such as hurricanes, flooding, heatwaves, heavy rainfall, and snowstorms. These disasters have immediate negative effects and result in long-term disruptions in agriculture, infrastructure, and livelihoods.



Moreover, the effect of global warming results in the melting of polar ice and subsequent expansion of seawater, resulting in the elevation of sea levels. This phenomena poses a hazard to coastal regions, resulting in the erosion of shorelines and the displacement of communities, with island nations and towns on the coast being particularly vulnerable.

Climate change also has significant effects on wildlife and ecosystems. It modifies habitats and disturbs the natural balance of many ecosystems, resulting in a decline in biodiversity. Species that are unable to adapt at a rapid pace may encounter the risk of extinction. For example, elevated carbon dioxide levels in the oceans result in acidification, which presents a significant risk to marine organisms, particularly corals and shellfish. Live coral reefs, for instance, have nearly halved in the past 150 years, and further warming threatens to destroy almost all remaining reefs.



Source: <https://www.un.org/en/climatechange/science/climate-issues/biodiversity>

In addition to its environmental impacts, climate change presents considerable health risks to human beings. Elevated temperatures can result in heat-related diseases, alterations in climatic conditions might impact the availability of water and food, hence causing malnutrition or hunger, and there is an increased probability of the expansion of vector-borne diseases such as malaria into originally unaffected regions.

The societal and economic consequences of climate change are equally significant. The changing weather patterns have an important impact on agriculture and food security, as they modify crop yields and might potentially result in food shortages and higher costs. While certain places may see advantages from increased temperatures, the overall effect on agriculture is expected to be negative, particularly in countries with lower incomes. The monetary effects of climate change are extensive, encompassing the destruction of infrastructure and property, reduced production, and the financial costs of adjusting to changing environment. Severe weather phenomena and the escalation of sea levels have the potential to displace individuals, resulting in climate refugees and giving rise to social and political problems within communities that must accommodate a flood of displaced people.



Tackling climate change necessitates the use of both mitigation and adaptation strategies. Mitigation initiatives primarily aim to decrease the release of greenhouse gases and strengthen the capacity of natural systems, including forests, to absorb and eliminate these gases from the environment. This encompasses the shift towards utilizing renewable energy sources, enhancing energy efficiency, and modifying consumption and land use practices. Adaptation involves changing ecological, social, or economic systems in reaction to current or future climate conditions. This include the construction of resilient infrastructure, the growing of products that are able to endure flooding, and the enhancement of water management. The understanding and management of climate change are of paramount importance, emphasizing the critical role of environmentally-friendly competence and sustainable progress in constructing a resilient and adaptable society.

- **Loss of Biodiversity**

Biodiversity loss, which refers to the range of life forms on Earth, is a pressing worldwide environmental issue that is happening at a worrying pace. This decline involves not only the extinction of individual species but also the decrease in the range of habitats and the genetic variation within species. The main causes of this decrease are predominantly anthropogenic, encompassing extensive habitat degradation, pollution, overexploitation, and the introduction of non-native species. These actions disturb the delicate equilibrium of ecosystems and result in a decrease in the population of many species, occasionally resulting in their extinction.

Habitat destruction, which is frequently caused by the expansion of agriculture, urbanization, and deforestation, is arguably the most influential element. The fragmentation of ecosystems results in the loss of natural habitats, which are essential for the survival and reproduction of numerous species.

The pollution is a significant contributor that has adverse effects on the quality of air, water, and soil. Chemicals, plastics, and other waste items not only pollute ecosystems but also cause direct harm to species. For example, the practice of overfishing has resulted in a substantial reduction in marine biodiversity, since numerous fish populations have been excessively fished, surpassing acceptable boundaries and causing damage to the biological equilibrium of the ocean.

Moreover, the introduction of invasive species into new environments, whether accidentally or intentionally, can have devastating effects on native species. These invasive species often outcompete native flora and fauna for resources, leading to their decline or extinction. Invasive species can also introduce new diseases to which native species have no immunity.



The significant consequences of biodiversity loss are evident. It diminishes the ability of ecosystems to survive and recover out of changes, making them more vulnerable to environmental changes. This loss additionally impedes the crucial ecosystem services that nature gives upon humanity. Pollinators, such as bees and butterflies, play an integral part in the reproduction of various plant species, including a number of crops that are essential for human food supply. The loss of biodiversity poses a threat to nature's functions such as water purification through wetlands and disease regulation by different species in an ecosystem.

Furthermore, biodiversity plays a critical role in climate regulation and carbon sequestration. Forests and oceans, rich in diverse life forms, act as carbon sinks, absorbing and storing large amounts of carbon dioxide from the atmosphere. The loss of biodiversity in these ecosystems can therefore exacerbate climate change.

“
Climate change is a primary driver of biodiversity loss. And climate change depends on biodiversity as part of the solution. So clearly the two are linked, and cannot be separated.”

Elizabeth Mrema, Executive Secretary, United Nations Convention on Biological Diversity

MAY 2022

Source: <https://www.un.org/en/climatechange/science/climate-issues/biodiversity>

In addition, biodiversity has immense cultural, aesthetic, and scientific value. It contributes to the well-being of humans, offering recreational, spiritual, and educational benefits. The loss of biodiversity also means the loss of potential resources for medicines and other products that could benefit humanity.

Addressing the loss of biodiversity requires a multi-faceted approach, including protecting natural habitats, enforcing sustainable fishing and hunting practices, controlling pollution, and managing invasive species.



It also involves fostering a deeper understanding and appreciation of biodiversity among the general public and policymakers. Preserving biodiversity means maintaining the well-being and equilibrium of the Earth's ecosystems, which are essential for the survival of all life, including that of the human species.

- **Deforestation and Forest Degradation**

Deforestation and forest degradation are major global environmental issues that have extensive and wide-ranging consequences. Forests, which cover about 31% of the Earth's land surface, are necessary for sustaining life on our planet. They offer a habitat for a multitude of species, including numerous ones that have not yet been found or completely understood. Forests are important for carbon sequestration, serving as significant carbon reservoirs. Plants absorb carbon dioxide from the atmosphere during photosynthesis and retain it as biomass. This makes them essential in the battle against climate change.

The primary drivers of deforestation and forest degradation are human activities, particularly agriculture, logging, and urban expansion. Agriculture accounts for the largest percentage of forest loss, where forests are cleared to make way for crops or livestock. Logging, both legal and illegal, leads to the cutting down of trees for timber and paper products. Urban expansion also contributes to forest loss as cities grow and require more space for housing and infrastructure.

Moreover, the consequences of deforestation and forest degradation are significant and diverse. As previously said, one of the most urgent consequences is the acceleration of climate change. Deforestation decreases the ability of trees to absorb carbon dioxide and also releases the stored carbon into the atmosphere, increasing the effects of global warming. This process also affects local climates and can result in increased variations in temperature.

Deforestation and forest degradation also have significant impacts on water cycles. Forests play a key role in the hydrological cycle by regulating the flow and quality of water. Trees help to maintain the balance of water on land and provide a filter for water that flows into our rivers and lakes. The removal of trees disrupts these processes, leading to problems such as soil erosion, reduced water quality, and increased risk of flooding or drought.

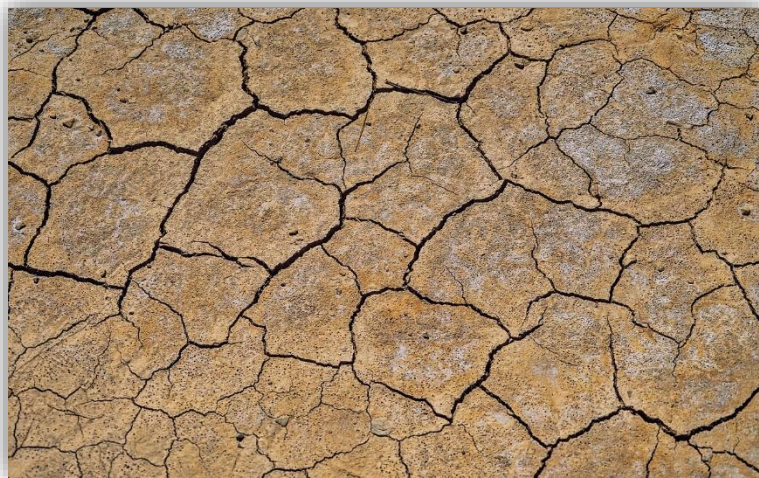
Moreover, the social and economic impacts of deforestation are also notable. Many indigenous communities and local populations rely on forests for their livelihoods, shelter, food, and culture. The loss of forests can therefore have devastating effects on these groups. In addition, deforestation results in the loss of economic advantages derived from forests, such as ecotourism and the sustainable extraction of timber and non-timber forest resources.



Deforestation and forest degradation must be addressed through coordinated local, national, and international initiatives. This include the implementation and enforcement of legislation aimed at safeguarding forests, the promotion of sustainable forestry methods, and the provision of support for land-use planning that finds a balance between the demands of agriculture and urban development and the preservation of forests. Reforestation and afforestation are fundamental for the restoration of damaged forest lands and the expansion of the global forest cover. Furthermore, promoting consciousness regarding the significance of forests and involving communities in the preservation of forests might have a significant effect on preserving these critically important ecosystems for future generations.

- **Water Scarcity and Pollution**

The concerns of water scarcity and pollution are critical issues that pose a significant threat to both human health and the environment. Freshwater resources, essential for life, are under increasing pressure globally due to overuse and pollution. Currently, water scarcity affects more than 40% of the global population, a figure that is expected to rise due to factors such as population growth, urbanization, and climate change.



Source: <https://pixabay.com/es/photos/suelo-seco-estructura-contraste-4257252/>

Agricultural practices are the main cause of the excessive utilization of water resources, as they absorb a substantial proportion of the global freshwater reserves. Both industrial utilization and household usage also contribute to the depletion of these resources. As the availability of water decreases, the competition for this essential resource increases, resulting in disagreements and aggravating pre-existing economic and social inequalities.



The contamination of water bodies complicates the situation. Industrial waste, which frequently contains harmful chemicals, is regularly released into rivers and lakes, resulting in the pollution of these water sources. The pollution of freshwater habitats is also caused by agricultural runoff, which includes fertilizers and pesticides. These contaminants not only have a detrimental impact on marine organisms but also affect the quality of drinking water, hence posing significant health hazards to humans.

Inadequate sanitation is another major factor contributing to water pollution. In many parts of the world, especially in developing countries, lack of proper waste management and sanitation infrastructure leads to the contamination of water bodies with human waste. This contamination can result in the spread of waterborne diseases, such as cholera and dysentery, which are major public health concerns.

Furthermore, the impact of water scarcity and pollution on aquatic ecosystems cannot be overstated. Aquatic ecosystems are fundamental for maintaining biodiversity, and they provide various services such as food provision, water purification, and recreational opportunities. Pollution and scarcity disrupt these ecosystems, leading to the loss of species and negatively affecting the benefits these ecosystems provide.

A multimodal strategy is needed to address pollution and water scarcity. It is critical to implement sustainable water management methods, which involve the effective utilization of water in agriculture and industry. Preserving and renewing natural ecosystems, such as wetlands, that play a vital role in water purification is imperative. Enhancing sanitation infrastructure and practices, especially in developing nations, can greatly diminish water pollution and the related health hazards.

Moreover, the implementation of laws and regulations governing the emission of contaminants into aquatic ecosystems is necessary to guarantee that industry and agricultural establishments comply with environmental benchmarks. Public awareness and education regarding the significance of water preservation and the consequences of pollution are of equal importance in developing a sense of accountability towards water resources.

- **Air Pollution**

Air pollution, including both outdoor and indoor environments, represents a critical environmental and public health challenge. This pervasive issue is responsible for millions of premature deaths each year, with a wide range of health problems attributed to the poor quality of air we breathe. The major sources of air pollution are varied and include the burning of fossil fuels, industrial emissions, and agricultural activities.

The burning of fossil fuels, such as coal, oil, and gas, primarily for electricity generation and transportation, is one of the leading causes of air pollution. This process releases a variety



of harmful pollutants into the atmosphere, including particulate matter (PM), nitrogen oxides (NO_x), sulfur dioxide (SO₂), and volatile organic compounds (VOCs). These pollutants can lead to respiratory and cardiovascular diseases, as well as other health problems.



Source: <https://pixabay.com/es/photos/industria-contaminaci%C3%B3n-ambiental-1761801/>

Industrial activities contribute significantly to air pollution, especially in areas with heavy manufacturing. Factories and plants emit a range of pollutants, including heavy metals, chemicals, and particulate matter. Without proper regulation and emission control technologies, these pollutants can severely degrade air quality and pose health risks to nearby populations.

Agricultural activities are another significant source of air pollution. The use of pesticides and fertilizers in farming releases harmful chemicals into the air. Additionally, livestock farming produces methane, a potent greenhouse gas, while certain farming practices can generate particulate matter and other pollutants.

Indoor air pollution is a less visible but equally significant problem, particularly in developing countries where the burning of biomass for cooking and heating is common. This practice releases smoke and a variety of pollutants indoors, where poor ventilation exacerbates their concentration and impact on health. Indoor air pollution can cause respiratory diseases, lung cancer, and other health issues.

Apart from its direct impact on human health, air pollution is a contributing factor to climate change. Pollutants like carbon dioxide and methane are greenhouse gases, trapping heat in the Earth's atmosphere and driving global warming. Other pollutants, such as black



carbon (a component of particulate matter), directly absorb sunlight, further contributing to the warming of the atmosphere.

However, the impacts of air pollution are not just limited to health and climate change. They also affect ecosystems through the deposition of pollutants in soil and water bodies, leading to acidification and eutrophication, which can harm wildlife and degrade the quality of natural habitats.

To deal with air pollution effectively, it is necessary to adopt an integrated approach that focuses on minimizing emissions from key sectors such as transportation, industry, and agriculture. This can be accomplished by implementing more stringent rules, embracing cleaner technologies, and moving to renewable energy sources. Enhancing urban design and public transportation infrastructure can effectively mitigate car emissions, while fostering public awareness and promoting modifications in individual behavior can also significantly contribute to the improvement of air quality. To reduce interior air pollution, one can enhance ventilation, employ cleaner fuels and stoves for cooking, and minimize the utilization of toxic substances indoors.

Tackling air pollution is essential for safeguarding human health, conserving the environment, and reducing climate change. Significant and sustainable changes in air quality require collaborative efforts from governments, businesses, communities, and individuals.

- **Plastic Pollution**

Plastic pollution has emerged as a growing environmental concern, significantly impacting ecosystems, wildlife, and human health. The widespread use and disposal of plastic products have led to an accumulation of plastic waste in various environments, particularly in the oceans. This issue is exacerbated by inadequate waste management practices, especially in rapidly urbanizing areas.

The manufacturing of plastic has had a significant and rapid increase over the past few decades, primarily due to the high demand for inexpensive, long-lasting, and adaptable materials. Nevertheless, the long-lasting nature of plastics implies that they endure in the environment for prolonged durations. A considerable proportion of the garbage made of plastic produced is deposited into the oceans, either because of a direct result of inadequate waste management techniques in close proximity to coasts or indirectly through rivers and waterways. Upon entering the ocean, plastics undergo fragmentation into tiny fragments called microplastics, although they never completely undergo decomposition. Consequently, this promotes the accumulation of plastic garbage in marine ecosystems.



Moreover, plastic waste presents a significant danger to marine life. Marine organisms, such as fish, seabirds, and marine mammals, has the potential to consume plastic waste, often confusing it with their regular food sources. Consuming this chemical can result in bodily injury, obstruction of the digestive system, and perhaps fatal consequences. Plastics have the ability to ensnare wildlife, impeding their mobility and resulting in harm or death via suffocation. Plastics in the oceans cause disruptions in marine ecosystems, impacting the food chain and the well-being of these habitats.



Source: https://www.greenpeace.org/usa/wp-content/uploads/2018/04/GPOSTR1T7_Medium_res-970xcenter-c-default.jpg

Microplastics have become a widespread problem. These little particles are not exclusively consumed by smaller marine animals but can also amass in the bodies of larger animals that are higher in the food chain, including humans. The health effects of microplastics on people are currently under investigation, however, there is an increasing apprehension regarding their ability for carrying toxins and interact with the functioning of biology.

Anyway, the problem of plastic pollution is not limited to marine environments. Plastics are found in terrestrial ecosystems, freshwater lakes, and rivers, affecting a wide range of organisms and habitats. In urban areas, plastic waste can clog drainage systems, exacerbating flooding and creating breeding grounds for disease-carrying insects.

Inadequate waste management, especially in quickly urbanizing and developing areas, has a substantial impact on the plastic pollution situation. Insufficient infrastructure in numerous regions results in the absence of proper trash collection, recycling, and disposal systems, which in turn leads to the indiscriminate dumping of waste in open spaces, aquatic bodies, and unregulated landfills. This not only exacerbates environmental pollution but



also presents major dangers to health, as garbage may pollute water sources and provide poor living conditions.

Fighting plastic pollution necessitates an extensive and diverse strategy. It is imperative to take essential measures such as decreasing the manufacturing and utilization of disposable plastics, expanding waste management systems, and improving recycling initiatives. Public awareness campaigns and education have the potential to exert a substantial influence on consumer behavior, fostering the adoption of more sustainable practices. Furthermore, advancements in materials science, such as the creation of biodegradable plastics, along with the adoption of regulations that encourage responsible plastic usage and disposal, can help mitigate this ecological issue.

After carefully reviewing these urgent environmental concerns, it is clear that they are not only serious but also deeply interconnected. Additionally, apart from the previously mentioned issues, there are other additional environmental challenges requiring consideration. Soil degradation is a significant problem that has an adverse effect on both crop production and the ecological balance of ecosystems. Other notable issues include the exhaustion of natural resources, the rapid growth of metropolitan areas, and the ecological consequences of mining and extraction sectors.

The various environmental challenges highlight the complex and pressing nature of the current undertaking. They illustrate the necessity for broad, integrated solutions that tackle multiple issues simultaneously. While addressing these issues, it is important to acknowledge that efforts done to improve one issue can have considerable beneficial impacts on others, ultimately fostering a more sustainable and resilient environment.



Source: <https://pixabay.com/es/photos/cambio-clim%C3%A1tico-protesta-gente-7127153/>

III. The importance of green skills in the modern workforce

This following chapter explores the fundamental importance of green skills in today's changing labor market and their increasing relevance across diverse industries. We will analyze the specific meaning and broad spectrum of these skills, comprehend their influence on the economy and environment, and examine the rising patterns in environmentally-friendly employment.

- **Definition and scope of green skills**

Green skills cover a wide range of knowledge, skills, values, and attitudes that are critical to promoting a sustainable and efficient society that preserves resources. These skills are not limited to one specific sector or industry, but rather extend across multiple sectors, demonstrating the widespread requirement for environmentally friendly techniques and approaches.

The essence of green skills lies in recognizing that our activities and choices, be it in business, agriculture, building, or energy generation, have a significant impact on the environment. Therefore, these abilities are crucial in a wide range of industries, including energy, manufacturing, construction, and agriculture. In sectors such as finance and planning, both are of equal importance as the decisions made can have a significant effect on sustainable results.

Green skills are a combination of technical knowledge and transferable skills.

From a technical point of view, these skills are typically specialized in the field of environmental services and technologies. This includes expertise in renewable energy technology, specifically solar and wind power, competence in effective waste management practices, and competence in sustainable farming techniques, all of which are essential for reducing our ecological impact.

Beyond these specific technical skills, green skills also encompass a range of transferable skills that are increasingly vital in our rapidly changing world. These include **critical thinking**, which allows individuals to analyze and evaluate the environmental impact of various actions and decisions. **Problem-solving skills** enable individuals and organizations to devise effective strategies for addressing environmental challenges. **Adaptability** is another key skill, allowing people to respond flexibly to changing environmental conditions



and evolving sustainability requirements. Finally, **innovation is central to green skills**, driving the development of new, sustainable solutions to environmental challenges.

In brief, green skills are a varied and ever-evolving collection of competences that are essential for anyone who is interested in making contribution to a more responsible and sustainable future. They are relevant in a wide variety of contexts and industries, which highlights the universal relevance and significance of sustainability in the modern world we live in. Whether it be through specialized technical skills or more general transferable skills, green skills give individuals and organizations the ability to have a beneficial impact on society and the environment.

- **Imperatives for the Economy and the Environment**

The transition to a greener economy represents both an environmental necessity and a substantial economic opportunity. As the global community increasingly recognizes the need for sustainable practices, there is a marked shift in how economies operate, leading to the creation of new job roles and the transformation of existing ones. This shift necessitates new skill sets focused on sustainability, which are becoming fundamental in the modern workforce.

Central to this shift is the need for companies to embrace sustainable practices. **Green skills are essential in facilitating this shift.** They facilitate the implementation of resource optimization strategies in businesses, resulting in a substantial reduction in their environmental footprint. This enhanced efficiency frequently results in cost savings, as organizations utilize a reduced amount of resources and energy while producing a reduced amount of waste. Furthermore, using environmentally-friendly methods may improve a company's present, making it more appealing to consumers and investors who are constantly aware of environmental issues.

Additionally, companies in the energy sector are increasingly turning to renewable sources like wind and solar power. By employing individuals skilled in these technologies, these companies are not only contributing to a reduction in greenhouse gas emissions but are also capitalizing on the growing demand for clean energy.

In the agriculture sector, the adoption of sustainable farming techniques, which requires specific green skills, has led to more efficient water use, reduced use of harmful pesticides, and improved soil health, contributing to long-term productivity and sustainability.

These examples illustrate that the transition to a more environmentally friendly economy not only benefits the environment but also provides significant financial advantages for businesses. Companies can establish themselves as sustainability leaders and expand their market reach by adopting green skills. This not only creates opportunities for business but also contributes to the worldwide effort of environmental preservation.

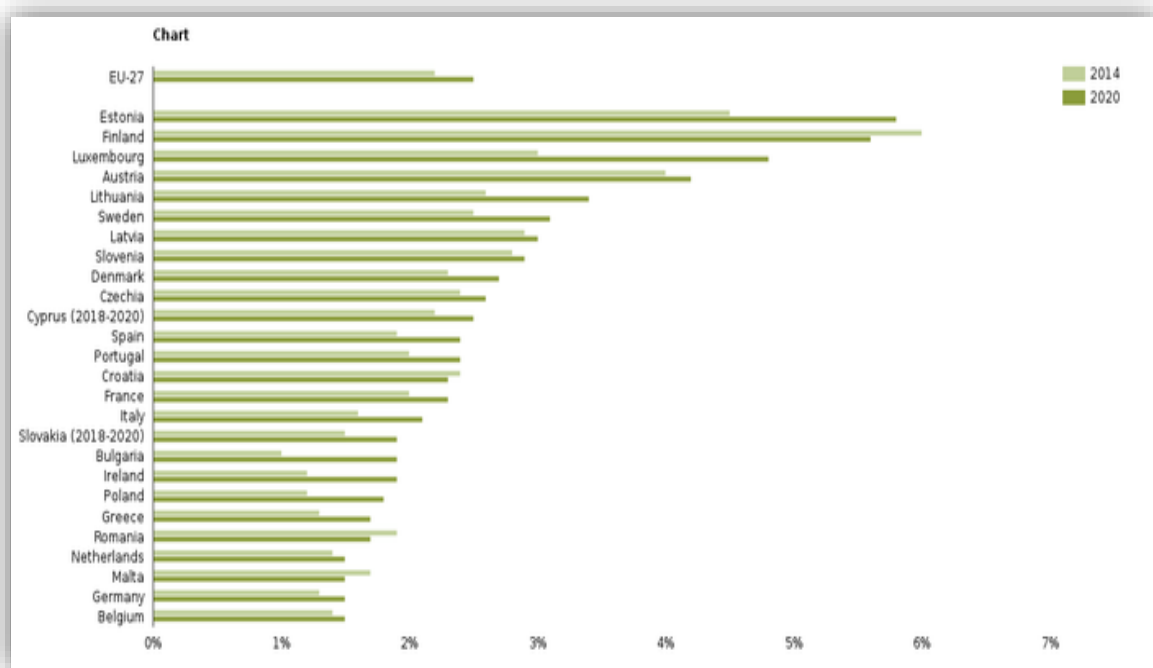


- Green jobs and employment trends

According to the European Environment Agency:

“The employment in the EU’s environmental goods and services sector grew at a faster rate than the EU’s overall rate of employment in the last decade. It increased from 2.1% of total employment in 2010 to 2.5% in 2020, with the number of full-time equivalent employees in this sector reaching 5.1 million. This was mainly the result of the creation of jobs related to renewable energy, energy efficiency and waste management. The EU aims to accelerate the green transition of its economy and also become carbon neutral by 2050. This is expected to boost job creation in the EU’s green economy in the coming years and therefore further increase the share of green employment in the EU economy as a whole.”

Employment in the environmental goods and services sector by EU Member States, 2014 and 2020



Source: <https://www.eea.europa.eu/en/analysis/indicators/employment-in-the-environmental-goods>

The distribution of employment in the environmental economy varies throughout EU Member States. In 2020, the majority of environmental employment in Estonia, Finland, Luxembourg, and Sweden was comprised of jobs related to resource management, including the management of energy and water resources. Conversely, the majority of environmental employment in Belgium, Croatia, and Malta was found in environmental protection activities, such as waste and wastewater management operations, with percentages of 78% and 73% respectively.



Moreover, according the recent **Global Green Skills Report 2023 of LinkedIn**:

- 1) *“From 2015 to 2023, employment in the renewable energy industry grew in every country we studied. For every 100 workers who left the global renewable energy sector, 120 workers joined.”*
- 2) *“The skills profile for the average job changed 24% between 2015 and 2022 — and green skills are increasingly among the newly added skill requirements.”*
- 3) *“Between 2022 and 2023 alone, the share of green talent in the workforce rose by a median of 12.3% across the 48 countries we examined, while the share of job postings requiring at least one green skill grew nearly twice as quickly — by a median of 22.4%.”*



Source: *Global Green Skills Report 2023 (LinkedIn)*

According the LinkedIn report, there is a need of a second form of transition, which involves the progressive transformation of jobs to integrate a larger quantity of green skills in a more profound and influential manner. Occupations ranging from fashion designer to fleet manager to financial analyst can be executed in a manner that is more environmentally friendly if the individuals occupying these roles possess and apply green skills. Indications of a positive nature suggest that this transformation is currently in progress. Consider, for instance, occupations associated with the administration of supply chains.



For numerous businesses, the route to lowering carbon emissions lies in their supplier networks. Procurement and supply chain specialists play a crucial role in combating the climate catastrophe. With the changing nature of these positions, an increasing number of individuals are acquiring the necessary green skills to do them effectively.

Moreover, carbon accounting and sustainable procurement are rapidly becoming as highly sought-after green skills in both the United States and the European Union. The chart below enumerates many job titles that are not commonly associated with green jobs, but are increasingly demanding specific green abilities. By acquiring the green skills relevant to their occupations, workers can enhance their competitiveness in their respective industries and actively contribute to the battle against climate change. Amidst the current trend of corporations focusing on reducing the environmental impact of their buildings, many facilities personnel are increasingly utilizing their expertise in energy efficiency.

Green skills are increasingly relevant across more job titles
Examples of green skills and the titles where they are growing

<p>Climate change</p> <ul style="list-style-type: none"> Meteorologist Agriculture Specialist Policy Advisor Marine Biologist Agriculture Specialist 	<p>Energy Efficiency</p> <ul style="list-style-type: none"> Plumbing Engineer Utilities Manager Project Sales Engineer Vice President, Facilities Heating and Air Conditioning Engineer 	<p>Environmental Awareness</p> <ul style="list-style-type: none"> Park Manager Safety Assistant Geographic Information System Officer Geographer Archaeologist
<p>Sustainable Design</p> <ul style="list-style-type: none"> Architectural Manager Landscape Architect Director of Interior Design Urban Planner Construction Administrator 	<p>Agronomy</p> <ul style="list-style-type: none"> Sales Operations Assistant Entomologist Winemaker Technical Sales Representative 	
<p>Renewable Energy</p> <ul style="list-style-type: none"> Business Engineer Project Finance Analyst Distribution Engineer Land Acquisition Manager Project Sales Engineer 	<p>Erosion Control</p> <ul style="list-style-type: none"> Director of Public Works Construction Inspector Survey Project Manager Civil Designer Transportation Engineer 	

Source: Global Green Skills Report 2023 (LinkedIn)

We invite you to read the full report [here](#).



In addition, the renewable energy sector is experiencing significant growth. According to the International Renewable Energy Agency (IRENA), the number of jobs in renewable energy worldwide exceeded 11 million in recent years, with continued growth expected. Solar and wind energy are leading this expansion.

Sustainable agriculture practices are being adopted worldwide to reduce environmental impact and improve food security. This shift is creating new opportunities in organic farming, permaculture design, and sustainable fisheries.

The green building market is booming, driven by increasing demand for energy-efficient and environmentally sustainable construction practices. [The World Green Building Trends report](#) suggests a continuous rise in green building, with a significant percentage of construction professionals expecting to work on green projects. Moreover, architects, engineers, and construction workers in this field require expertise in sustainable building design, knowledge of green building materials, and understanding of energy-efficient systems.

Also, sustainability consultant is a career on demand. According to [Statista](#), in the UK, the revenue for environmental consulting grew from £1.19 billion in 2006 to £1.86 billion in 2021. In the US, the revenue is expected to be a whopping [\\$12.4 billion](#) by 2024. The demand is increasing not only because people want change, being sick of pollution, emissions, and growing waste, but also because governments are stepping in to impose stricter laws in order to ensure compliance with environmental policies.

Sustainability consultants offer advice on practices, processes, and systems to companies who want to become more sustainable. The following are several niches within sustainability consulting: Sustainability Strategy, Circular Economy, Product Carbon Footprint, Corporate Social Responsibility, Travel Cost Optimization, and Business Process Transformation.

Sustainability consulting is a field of work that requires passion and a genuine interest. However, one cannot become a consultant overnight. Even after gaining relevant qualifications, one has to receive job training and learn about new methods and technologies along the way.

In conclusion, the green job market is diverse and dynamic, offering a range of opportunities across multiple sectors. As this market continues to evolve, the demand for skilled professionals in these areas is likely to increase, making green skills an essential component of future workforce development.



IV. Understanding the sustainable development goals

The United Nations has developed the 17 Sustainable Development Goals (SDGs) as a complete and ambitious agenda to tackle various worldwide issues by the year 2030. These goals are universal, addressing an extensive variety of interconnected challenges with the purpose of establishing a more sustainable, fair, and prosperous world for everyone.



Source: <https://sdgs.un.org/goals>

Firstly, the goals address fundamental human needs and rights, such as the eradication of poverty and hunger, ensuring health and well-being, and providing quality education. They recognize that a foundational step towards sustainable development is addressing these basic needs. Similarly, gender equality is a standalone goal, emphasizing the importance of empowering women and girls as key to advancing all areas of development.

The SDGs also focus on environmental sustainability, which includes providing clean water and sanitation, affordable and clean energy, and taking urgent action to combat climate change and its impacts. These goals highlight the critical need to protect our natural resources and to ensure that development does not come at the cost of environmental degradation.

Economic growth and decent work for all are also central themes, reflecting the understanding that sustainable development requires robust economies and employment opportunities. This is complemented by goals focusing on industry, innovation, and infrastructure, recognizing the role of technology and industry in driving progress.



Furthermore, the goals emphasize the necessity of reducing inequality within and among countries. This aspect underscores the importance of fair and equitable development, ensuring that no one is left behind as the world progresses.

Sustainable cities and communities are another key focus, reflecting the growing importance of urban areas in global development. Responsible consumption and production are addressed, advocating for more sustainable practices in how we use and manage resources.

Life below water and life on land are also crucial goals, aiming to preserve the world's diverse ecosystems, flora, and fauna. This highlights the interconnectedness of all life and the importance of biodiversity for sustaining life on earth.

Finally, the goals emphasize peace, justice, and strong institutions, acknowledging that sustainable development requires a peaceful and just society with effective and accountable institutions. The last goal underlines the importance of partnerships in achieving all the SDGs, recognizing that global challenges require global collaboration and cooperation.

The interdependent nature of these goals indicates that development in one field can enable improvements in others. In contrast, failure to pay attention to one area can have negative consequences for other areas. This interconnection necessitates an integrated approach to development, wherein several objectives are pursued simultaneously, acknowledging their reciprocal enhancement. The Sustainable Development Goals (SDGs) offer an extensive framework for effectively tackling the most urgent global concerns in a harmonized and unified manner, leading global efforts towards a future that is both sustainable and inclusive.

The successful achievement of the Sustainable Development Goals requires the active participation and collaboration of various stakeholders, including governments, businesses, civil society, and individuals. All of these groups contribute in a unique and integrated manner to this shared effort to create a more equitable and sustainable global community.

Governments are pivotal in creating the overarching framework within which the SDGs can be pursued. They have the unique authority to enact and enforce laws and policies that can create a favorable environment for sustainable development. This includes legislating environmental protection, ensuring social welfare, promoting economic development, and allocating resources effectively. Governments also play a fundamental role in fostering international cooperation, as many of the SDGs require global action.

Businesses, regardless of their size, play an integral part in fostering innovation and stimulating economic expansion, as they possess the necessary resources and talents to adopt



sustainable methodologies. Businesses may make significant contributions to achieving the SDGs by incorporating sustainability into their operations and business strategies. This encompasses allocating resources towards renewable energy, implementing sustainable practices in the supply chain, and developing innovative products and services that mitigate environmental harm. Moreover, they have the power to impact sustainability by implementing corporate social responsibility activities and establishing internal standards that exceed legislative mandates.

Civil society organizations, such as non-profit organizations, non-governmental organizations (NGOs), and community groups, serve as monitors, leaders, and facilitators of sustainable development activities. They have an essential task in increasing awareness, mobilizing the public, and advocating for policy reform. These groups frequently engage in locally efforts to carry out sustainable development initiatives, deliver essential services, and assure the representation of the most vulnerable citizens. Additionally, they ensure that governments and corporations are held responsible for fulfilling their obligations towards the Sustainable Development Goals.

Furthermore, it is important to highlight the significance of educators and youth workers within this ecosystem. They are on the frontlines of shaping the attitudes and skills of younger generations, making them instrumental in the long-term achievement of the SDGs. Youth workers can educate and empower young people about the SDGs. They can foster a generation that is knowledgeable about sustainability challenges and solutions. This education can take many forms, from non-formal teaching to experiential learning and community projects.

Moreover, youth workers can help young people develop the skills necessary to contribute to sustainable development, such as critical thinking, problem-solving, and leadership. These skills are not only essential for personal development but also enable young people to actively participate in sustainability initiatives.

Additionally, it's important to say that every individual has an essential role to play in the achievement of SDGs. Every person can contribute to the achievement of the SDGs through their lifestyle choices and actions. This includes making decisions that reduce personal environmental footprints, such as conserving energy and water, reducing waste, and choosing sustainable products. Individuals can also influence change by participating in civic activities, advocating for sustainable policies, and supporting organizations and businesses that prioritize sustainability.



V. Conclusion

We have explored the complex nature of sustainable development, recognizing its imperative not only for the conservation of the environment but also as an integrated approach that includes ecological, economic, and social dimensions. With this e-learning module we aimed to provide youth workers and readers in general, with an in-depth understanding of the pressing environmental challenges, such as climate change, environmental degradation, and lack of resources, emphasizing the urgent requirement for sustainable actions.

We addressed the meaning and extent of green skills, recognizing their significance beyond specialized environmental roles and their increasing value across diverse sectors. These abilities are crucial for fostering innovation, boosting sustainable business strategies, and making a significant impact on the economy's health.

Ultimately, we presented the United Nations Sustainable Development Goals, which serve as an extensive strategy for achieving a sustainable future. These goals serve as a reminder of the interconnection of global crises and the need for collaborative effort to tackle them.

We aspire through this module to improve the professional knowledge of youth workers and encourage them to actively promote transformation. The knowledge acquired here is crucial for supporting young people in their pursuit toward jobs that are in line with sustainable development. Youth workers have the potential to generate an important impact on the well-being and long-term viability of our planet, as well as the lives of young individuals.



VI. References

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