

# LEARNING MATERIAL

Young Women

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## 1. Women in the global workforce

## 1.1. Introduction

It was a nice day in April 1961 when two job offers appeared in the newspaper. The first was looking for a "loyal and friendly lady to serve" for a country inn with the assurance of "good treatment". The second was



for a "large restaurant" seeking an "experienced head waiter with international training" as "head of a restaurant department".



These advertisements reflected the gender distribution in the labour market in a stereotypical way by offering very different job opportunities to women and men.

But to which extent is this also true today? How has gender segregation developed over time?

The example of job offers from 1961 illustrates how long this problem has existed. However, it is encouraging to see that progress towards gender equality has been made over time. However, much work is still needed to ensure that women and men have equal opportunities and chances in the workplace in all occupational fields.

# 1.2nd Gender segregation at work - what are we talking about?

Gender segregation (also "sex segregation") at work is a phenomenon that still exists today and refers to the way men and women are distributed among certain jobs.





According to a commonly used definition, gender-specific job segregation exists when the number of women in individual jobs does not correspond to the number of women in total employment.

Women are more likely to work in service jobs such as care, education and administration, while men are more often found in fields such as technology, crafts and management.

This in turn leads to a highly gendered workforce.

Two types of gender separation in jobs are generally discussed: vertical and horizontal.

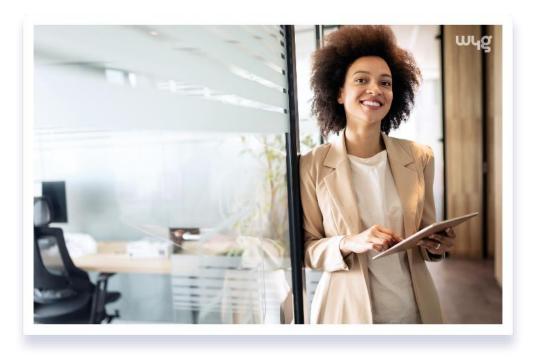


**Vertical segregation** is where women and men are in different jobs, with men dominating higher positions and women finding themselves in low-skilled and lower-paid jobs. If you are thinking for example of a corporate company, the management positions are mostly occupied by men.

**Horizontal segregation** looks at the distribution of women and men in different sectors and occupations across the labour market. For example, technical professions or the construction industry are strongly maledominated, while education, care and administration tend to be female-dominated.

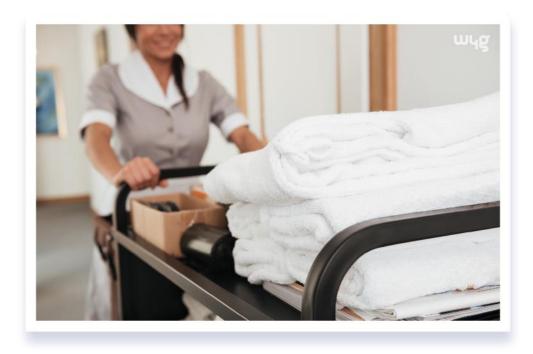
Horizontal and vertical segregation can also occur together. An example of this is the female-dominated sectors of health and education (horizontal segregation), where women are often found in lower-paid positions, while men occupy higher-paid management positions (vertical segregation).

This is also confirmed by EUROSTAT statistics, although almost half of the employed persons are women, they are underrepresented in managerial positions and thus in a better paid sector. In 2021, therefore, only 34.7% of women were employed as managers on average in the EU. In countries such as Germany (29.4%), the Czech Republic (28.4%) or Cyprus (21%), the share of women in managerial positions is even lower than the average.





Another example of gender segregation in the workplace is the concentration of women in lower-paid, less prestigious jobs, such as cleaning, childcare and administrative support. These occupations are often seen as "feminine" and undervalued in terms of pay and status, even though they make an important contribution to society.



On the other hand, men are overrepresented in high-paying fields such as engineering, technology, and finance. Women face significant barriers in entering these and other male-dominated fields, some factors repeatedly cited for this are:

- Stereotypes that women are not competent in these fields
- Discrimination in recruitment
- Discrimination in promotion
- A lack of female role models





Gender segregation can lead to a pay gap where women earn less than men on average, even when factors such as education and experience are taken into account. Gender segregation can also lead to a failure to make sufficient use of women's skills and talents in the workplace, resulting in a loss of productivity and potential.

#### Traditional gender roles remain in place

Even in school careers, there is a tendency for boys and girls to be steered into different academic directions or fields of study depending on their gender. Girls are more likely to study humanities, social sciences and arts, while boys are more likely to study STEM subjects. This can lead to girls having fewer opportunities in certain fields and can strengthen gender stereotypes.



**Gender stereotypes** (also gender labels) are a common idea about specific characteristics, attribute, behaviors s or roles that apply to men and women. For example, there is a common thinking that girls like pink and they play with dolls, while boys like blue and are into cars.



The term "**STEM subjects**" refers collectively to teaching and study subjects and professions in the fields of science, technology, engineering, and mathematics (e.g. physicist, web developer, biomedical engineer, software engineer etc.)

The latest data from Eurofound's *Living and Working in Europe 2021* study shows that more than half of the working population in the EU still works in jobs dominated by their own gender. This is still a fact - despite many efforts from politics and business for more equal access to sectors and occupations that are traditionally predominantly occupied by one gender.



Men also continue to have more "power and influence" in the workplace, with more men than women in the role of supervisor: two-thirds of employees had a male supervisor in 2021. And a deeper look into the data shows that the vast majority of men (80 %) have a male boss, while female employees are equally likely to have a male or female supervisor.



It also shows that there has been little change between 1998 and 2019, even though 30 million new jobs were created in the EU during that time - and two-thirds of them were filled by women. Men working in female-dominated jobs make up only 10% of the labour market population, while women working in male-dominated jobs make up just 8% (See also Table 1).



	women's share of employment in nine occupational groups EU 27			
	Managers	29	34	0/
	Professionals	47	54	
	Technicians & associate professionals	52	50	
	Clerical support workers	67	66	
	Service & sales workers	65	63	
	Skilled agricultural, forestry & fishery workers	43	32	
	Craft & related trade workers	14	11	
	Plant & machine operators & assemblers	19	18	
	Elementary occupations	52	55	
Source		1998	2019	

#### Table 1

In education, gender segregation can take the form of unequal access to training opportunities or different treatment of men and women in the workplace. For example, women may be excluded from certain training programmes or not receive the same level of support or guiding as their male counterparts.

These numbers are worrying, in order to achieve the goal of equality, women and men must have equal access to leadership positions with decision-making power.

Segregation at the workplace has numerous negative consequences for the economy and society, the most important of which you will now learn about:

#### • Limited career choice

Men and women may avoid or prefer certain jobs because of gender stereotypes or social norms as mentioned before. This limits career choices and leads to unequal employment opportunities. Long term, this affects women's careers by limiting or barring them from accessing certain professions or career opportunities. This leads to a shortage of women leaders and business founders, which in turn can affect economic development and growth. According to diverse studies female leadership is coming along with diverse advantages such as:

- oPositive influence on employee's productivity
- oPositive influence on business outcomes
- oPositive influence on customer side
- oPositive influence on gender diversity on all management levels



The glass ceiling refers to an invisible yet existing barrier that prevents women and minorities from advancing to leadership positions or earning higher salaries. It is a symbolic barrier that is not visible but can be very real and present.



The glass ceiling often arises because of prejudices and stereotypes that view certain groups of people as less suitable or qualified for leadership positions. Often these are gender biases that view women as emotional and less empowered. This has a negative impact on equal opportunities and diversity in companies and organisations. It makes it difficult for women and minorities to realise their full potential and leads to inequality in terms of salaries and career opportunities.

#### • Traditional gender roles at work and in the family

Certain professions or industries are still seen as "typically male" or "typically female". For example, women tend to be made responsible for caring for children or elderly relatives, while men see themselves as predominantly responsible for providing financial security for the family. If women avoid certain industries or professions because of this, it can lead to their talents and skills in these areas going unused and women having less access to career opportunities and promotions. In many cases, there are fewer women in leadership positions in "male-dominated" industries. This can lead to an unequal distribution in the workforce, as well as a lack of women leaders, and affect economic progress.



In addition, due to family responsibilities, women often avoid certain jobs or working hours and work in part-time models. Part-time work working models mean that a person is not working the organizationally defined full hours per week, but only an agreed number of hours per week either on fixed defined days or flexible on different days each week. Gender segregation can intensify these challenges by pushing women into jobs with little flexibility or with inappropriate working hours.



Susan is a single mother of one child and is searching for a job flexible job that allows her to manage her childcare responsibilities. She finds a job in the nursing sector, which often comes along with irregular and long working hours including working during the night and on the weekend.

In addition, in many "female-dominated" professions such as care, education or cleaning, working conditions are often worse and workloads higher. This leads to stress, burnout or health problems.





One way to fight traditional gender roles is to create a culture of equality and inclusion in the workplace. This means that a workplace is created that emphasizes a fair treatment and equal opportunities regardless of gender, race, religion or any other aspect of personal identity. Employers can offer flexible working time models to empower women to balance career and family. This means that employees are more flexible in completing their work in terms of time and/or place, for example they can choose when to do their work and if they are completing their work in the office or in homeoffice. Managers should actively work to increase the number of women in leadership positions.



#### Lower salaries

In many cases, the professions in which mainly women are working are less well paid than those in which men are mainly working. This leads to a gender pay gap even when men and women work in similar positions.

To reduce pay gaps, employers need to introduce transparent and fair pay structures based on performance and experience, regardless of gender. It is also important to raise awareness about pay gaps and actively counter discrimination.

**Equal Pay Day (EPD)** is an annual day of action to draw attention to the fact that women in many countries earn less on average than men.

The date of EPD varies from year to year and is calculated by dividing the average annual salary of women by 365 days to determine the number of days women would have to work longer compared to men to get the same annual salary.

In the EU, women earned on average 12.7% less per hour than men in 2021, which is equivalent to almost two months' salary.

In addition to this, countries have defined their own Equal Pay days according to national conditions, a list of which can be found here.

#### • Less influence on decisions





When there are less women working in "male-dominated" industries or professions, they often have less influence on decisions affecting their work. This can lead to their perspectives and interests not being adequately taken into account and to important decisions in these areas being shaped by a one-sided, male perspective.



#### • Negative impact on workplace culture

Gender segregation can lead to women facing prejudice, discrimination or sexual harassment in "male-dominated" industries or professions. This can create a toxic workplace culture and make the workplace uncomfortable or even unsafe for women. Thus, women avoid certain professions or industries, which in turn creates further reinforcement of gender segregation. It also hinders women's career development and prevents them from reaching their full potential.



To create an inclusive workplace culture, employers must actively work to fight discrimination and prejudice and promote a culture of equity and inclusion. This includes, for example, raising employees' awareness of unconscious bias, introducing training for inclusivity and cultural awareness, and promoting



women in leadership positions. Employers can also introduce flexible working models that make it easier for women to combine family and career. Open and inclusive communication should be encouraged to create a work environment where women feel welcome and valued.



**Unconscious bias** refer to prejudices or preferences that a person has because of unconscious attitudes or stereotypes based on experience, culture or socialisation.

These biases can cause a person to unconsciously make discriminatory choices or engage in behaviours that favour or disadvantage certain groups without being aware of it.

Unconscious bias can occur because of gender, age, race, ethnicity, sexual orientation, physical or mental disability or other factors.

In order to promote equal opportunities and diversity, it is important to be aware of the existence of "unconscious bias" and to take measures to identify and reduce this unconscious bias.

#### You are probably asking yourself: How can we contribute to fairness and equality?

Fighting gender segregation at the workplace requires a multi-faceted approach. This includes:

- questioning gender stereotypes and prejudices.
- implementing policies and practices that promote diversity and inclusion.
- Promoting education and awareness
- Addressing unconscious bias
- creating more opportunities for women to enter and advance in male-dominated fields.

For example, companies can offer mentoring programmes, flexible working arrangements and unconscious bias training to reduce barriers to women's inclusion in the workplace.



In the past few years, significant progress has been made in women's employment worldwide, but gender equality in the workplace is still far from being achieved. In the past, women faced many challenges and barriers in the workplace, including discrimination, lower pay, and limited opportunities for advancement.



However, with changing attitudes and policies, the number of women in the workplace has increased and the importance of diversity and inclusion is more widely accepted.



An important trend is the increasing number of women in leadership positions. In recent years, women have been appointed to high-level positions in many countries, e.g. as CEOs of large companies or as heads of government. This is already supported by legislation in some EU countries. Thus, this is a positive development that confirms that women are able to successfully lead and manage organisations. This is accompanied by a role model effect that has a positive impact on future generations of women.

Another trend is the growth of the gig economy, which offers women more flexible work opportunities. The gig economy refers to the growing number of freelance, temporary, and part-time jobs available online. This type of work can be particularly beneficial for women who need to balance caring responsibilities with their work, as they can work on their own terms and in their own location.



Gig economy refers to a part of the informal labour market where temporary jobs are given flexibly and at short notice to job applicants, freelancers or marginally employed persons.

## 1.3. Entering, Remaining, Counting

What is already established in many countries must be done globally: Women enter the labour market to stay - and not only in "typically female" jobs. Although it has been scientifically proven that mixed-gender teams perform better, women still struggle with exclusion experiences in many areas of society. While much progress has been made in terms of equality and gender equity, many dynamics remain that prevent women from reaching their full potential.

To counteract these dynamics, it is important to consciously recognise and address them. Communication can create a better understanding of the challenges women have to overcome on their way to gender justice.

Main exclusionary dynamics of women can take place at different levels. Some of the most common are:





Gender stereotypes	Gender stereotypes are deeply rooted assumptions about how men and women should be. These stereotypes can lead to women not being accepted or respected in certain roles and professions.	To counteract these exclusionary dynamics, it is important to consciously recognise and challenge stereotypical ideas of gender roles.
Discrimination	Women can be discriminated against because of their gender, which can lead to a variety of exclusionary experiences. Discrimination can manifest itself in various forms, such as unequal pay, lack of promotion opportunities or sexual harassment in the workplace.	To break these dynamics, it is essential to stand up for women's rights and to openly name and fight discrimination.
Unbalanced gender distribution	In some areas, women are still underrepresented, whether in leadership positions, in politics or in academia. This can lead to women feeling isolated and excluded.	At this point, awareness of the importance of gender balance needs to be raised. Women should be encouraged through information and meetings to get involved in areas where they are traditionally underrepresented. Gender imbalance affects everyone, even if to different degrees, so men should also be educated about the benefits of having more women (or diversity in general) in important positions and encouraged to do so.
Inadequate support systems	Women often have additional obligations and responsibilities, such as caring for family members or working in unpaid household jobs. Inadequate support systems, such as lack of childcare facilities or flexible working conditions, can lead to women being excluded from certain fields.	The fairer sharing of family responsibilities and tasks, as well as greater support for people who are busy with additional obligations such as care, or childcare would be necessary at this point.

In addition to the dynamics mentioned above, there are still many other barriers that can prevent women from developing their careers and being visible, such as:

- Gender Pay Gap
- Lack of opportunities for personal rise
- Gender stereotypes
- Lack of visibility
- Lack of networking opportunities
- Family care and workload





• Lack of self-confidence and assertiveness



 To overcome these barriers, measures are needed to promote equal pay, equal opportunities for career advancement and equal networking opportunities for women as well as men. Promoting flexible working conditions and supporting family care can also help women advance their careers and become more visible.

### 1.4th Self-perception, self-efficacy beliefs, and resilience

Gender stereotypes can make women feel that they do not have certain skills or characteristics. As a result, they have less self-confidence and self-esteem.

Self-perception, the self-efficacy belief as well as resilience are important factors that significantly influence how gender stereotypes affect them and how they react to them. Are you wondering what is behind these terms?



**Self-esteem** is the evaluation one has of oneself, one's qualities and abilities. Self-worth is influenced by how a person perceives themselves at the moment and what image they have of themselves in the past. This affects one's feelings and behaviour.

**Self-efficacy belief** is a subjective conviction of being able to cope with new or difficult challenging situations because of one's own competencies. The concept is based on the social cognitive theory of Albert Bandura (1986).

**Resilience** describes the psychological process of coping and adapting to difficult or challenging situations. If a person is resilient, he or she is considered to be able to resist and adapt.

Self-efficacy beliefs are a protective factor that can help women to develop self-confidence and self-esteem and to successfully follow and realise their own goals despite these stereotypes.



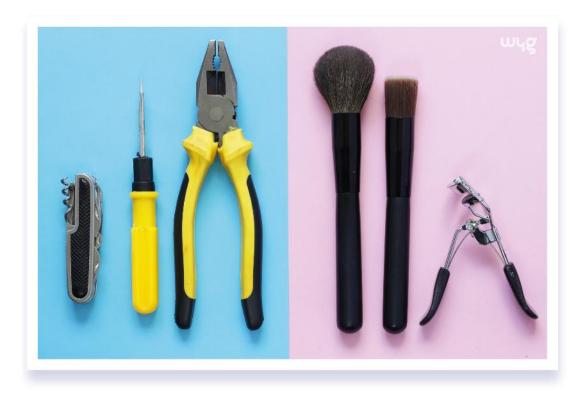


Resilience is another important building block for overcoming setbacks and succeeding in the professional world despite challenges. In this respect, it is essential to consciously address gender stereotypes - for example, resilience can be promoted through training or coaching or mentoring programmes for women.

#### At this point, you might also ask yourself how gender stereotypes came into being in the first place?

Gender stereotypes arise from the cultural and social expectations associated with gender. These expectations can be influenced by various factors, such as cultural traditions, media content or educational methods.

Gender stereotypes function by providing a fixed idea of what men and women should be like and what qualities they possess. Women are often described as more emotional, caring and communicative, while men are presented as more rational, dominant and self-confident.



These stereotypes can affect women's and men's perceptions of themselves by adapting and acting in a corresponding way.

For example, women may believe that they are unable to achieve certain male-dominated positions or jobs because they doubt, they have the necessary skills or qualities. Men, in turn, may feel pressured to conform to the male stereotype and hide their emotional or caring sides.

Gender stereotypes can also influence future-related decisions, such as career choices. For example, women often do not even consider occupations that are perceived as "masculine" or dominant (e.g., in technology or crafts), even though they would have the skills to do so. On the other hand, men often keep their distance from more "female-dominated" occupational profiles because they perceive them as not suitable or fear social degradation.





These stereotypes also have an impact on career opportunities, as women may have less access to career opportunities in fields that are seen as masculine. This can also lead to women being less confident and less likely to get into leadership positions.

To minimise the impact of gender stereotypes, we need to make more conscious efforts to recognise and fight them. This means challenging our own prejudices and stereotypes and taking action to create a more equitable and inclusive society where women and men have equal opportunities. This includes promoting gender equality, raising awareness of stereotypes and supporting women in the professional world.

It is essential to think and be critical in order to recognise and understand the impact of gender stereotypes on women's self-perception, self-efficacy beliefs and resilience.



Critical thinking requires us to question our own prejudices and stereotypes and to be aware of how they can affect our perceptions. Only through critical thinking we can recognise gender stereotypes and understand how they affect women and how we can fight them to create a more just and inclusive society. Critical thinking also helps us to recognise the role that we can take ourselves in fighting gender stereotypes by making conscious choices and actively working for equality and gender justice.

Resilience refers to the ability to overcome challenges and setbacks and come back stronger from difficult situations. There are various tools and strategies that people can use to strengthen and improve their resilience:

Strong support from social networks can help reduce stress and strengthen self-esteem.



- Mindfulness and meditation: Mindfulness exercises and meditation can help reduce stress and negative thoughts and strengthen mental health.
- Positive self-talk: Motivating and encouraging oneself in a positive way can help to increase self-esteem and self-confidence.





- Goal setting and planning: Setting goals and planning steps to achieve them can help create a sense of control and better manage challenges.
- Self-care: A healthy lifestyle, including good nutrition, adequate sleep, and regular exercise, can help reduce stress and build resilience.
- Positive thinking: A positive attitude and perspective can help reduce negative thoughts and doubts and boost self-confidence.

By applying these tools and strategies, one can improve one's resilience and be better prepared for difficult situations. It is important to emphasise that resilience is not something you achieve from one day to the next day but requires continuous work on yourself.





### 1.5. Summary

Gender segregation is a common phenomenon in the world of work, where men and women predominantly or exclusively perform certain occupations or areas of work because of their gender. This often leads to an unequal distribution of income, career opportunities and social recognition. Women are particularly affected by this dynamic as they often work in lower paid and less prestigious occupations.

One of the main causes of gender segregation in the workplace is the stereotypical idea of "typical" male and female occupations, which is often taught from childhood and influences career choice decisions. Women are often pushed into jobs with lower wages and fewer opportunities for advancement, while men work in higher-paid and more prestigious jobs.

To counteract this dynamic, it is important to challenge stereotypes in society and present a broader variety of role models. Women should be encouraged to enter fields that are traditionally male-dominated and to focus on their strengths and talents. It is also important to shape the workplace itself to ensure equal opportunities, e.g., through transparent career paths, equal pay, and measures to promote women in leadership positions.



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## 2. Green economy and green jobs

#### 2.1 Introduction

The discussion around an environmentally and climate compatible economy is characterised by various concepts that aim to conserve the environment and the available resources, one of which is the Green Economy. The basis of the Green Economy is the realisation that modernisation and development of the economy cannot take place along the previous economic development paths, but that the conservation of natural resources must be a central component of a sustainable economy.

The Green Economy describes an environmentally compatible economy in which the environment and the economy are in harmony. It is not an alternative, but a concretisation of the guiding principle of sustainable development at the intersection of economy and ecology.



Through a Green Economy, the aim is not only to reduce emissions and resource consumption but also to expand employment opportunities in sectors based on sustainable resource management and protection.

The hope is that developments like those in Western industrialised countries, where environmental technologies and renewable energy have created jobs, will emerge worldwide.

# 2.2 What is a "Green Economy" and what skills are required?

You have probably also asked yourself at some point how "Green Economy" is actually defined.







The UN Environment Programme has defined Green Economy as "...an economy that improves human well-being and social equity while significantly reducing environmental risks and ecological scarcities". In simple terms, a green economy can be seen as a low-carbon, resource-efficient, and socially inclusive economy.

Green Economy aims to combine ecology and economy. It is important that business is both internationally competitive and environmentally and socially compatible. If this balancing act works, it leads to an increase in social welfare, combats poverty, and strives for social justice.



The United Nations Conference on Sustainable Development in June 2012 ("Rio+20") recognised the green economy in the context of sustainable development and poverty elimination as a tool to achieve sustainable social, economic, and environmental development.

In this context, it is essential to recognise the ecological limits and, based on a comprehensive understanding of the interrelationships in the economy, finance, and politics, to enable qualitatively environmentally compatible and thus sustainable growth. The goal is to develop sustainable modes of production and consumption in order to ensure prosperity and high quality of life worldwide and especially for future generations.

The path to the Green Economy requires a process of change that affects society as a whole. It is about a comprehensive ecological modernisation of the entire economy and its sectors.



The following factors are important for an environmentally compatible economy:

Reduced resource consumption





- Reduction of emissions
- Increasing energy and raw material productivity
- Sustainable design of products, supply systems and infrastructures

To enable a sustainable future, questions about living and working conditions, consumption patterns, product life cycles and financing models must therefore be answered.

#### With this goal in mind, the EU has drawn up guidelines, which you will now get to know.

The European Union set itself the goal of becoming climate neutral by 2050 and has anchored this in the European Climate Change Act as the "Green Deal". This was presented by the Commission on 11 December 2019 and provides for an interim target of reducing net greenhouse gas emissions by at least 55 % by 2030.



**Net greenhouse gas emissions** are the difference between the greenhouse gases that are released into the air (e.g. by burning fossil fuels) and the greenhouse gases that are removed from the air through natural processes in forestry and agriculture (e.g. by planting trees) or through technologies.

The most important measures include:

- the promotion of renewable energies
- improving energy efficiency
- promoting a circular economy
- reducing emissions in the transport sector



Imagine the European Union as a town that is producing 100 units of greenhouse gas emissions through electricity, transportation, farming, industry in town, heating etc.. To reduce the emissions to 45 units, the town promotes more sustainable practices such as sustainable transport options (e.g. public transport), switching to renewable energy sources (e.g. wind/hydro/solar energy), promoting recycling and reuse, or adopting more sustainable agricultural practices.





Europe's ability to be competitive in the transition to a carbon-neutral economy depends significantly on its ability to develop and produce clean technologies that will make this transition possible.



In response to this challenge, President Ursula von der Leyen announced the European Green Deal Industrial Plan as an initiative at the World Economic Forum in Davos in January 2023. This plan aims to promote investment in clean technologies and help strengthen the EU's competitive advantages and ensure its pioneering role on the path to climate neutrality in the future. The European Council invited the Commission to present proposals by the end of January 2023 to mobilise all relevant national and EU instruments and improve the framework conditions for investment to ensure the EU's resilience and competitiveness.

In addition to the Green Deal Master Plan, there are other initiatives that support the fulfilment of the plan and reflect the importance of each pillar:

#### • Circular Economy Action Plan

This initiative is an action plan to support the **circular economy** for a cleaner and more competitive Europe. The plan contains a package of interlinked initiatives aimed at creating a strong and coherent framework for product policy. This is to make sustainable products, services, and business models the norm in order to change consumption patterns so that no waste is generated in the first place.

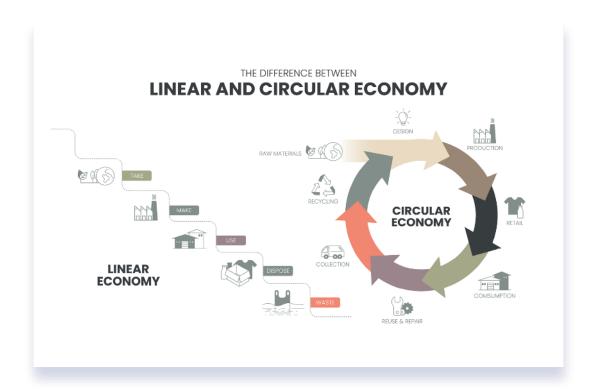


The circular economy is a model of production and consumption in which existing materials and products are shared, leased, reused, repaired, refurbished, and recycled for as long as possible. In this way, the life cycle of products is extended.





The circular economy contrasts with the traditional, linear economic model ("throwaway economy"). This model relies on large quantities of cheap, easily accessible materials and energy. So-called "planned obsolescence" is another feature of the throwaway economy. Here, products are deliberately designed for a short lifespan and break down quickly. The European Parliament is calling for action against this planned obsolescence.



#### • Fit for 55

The "Fit for 55" package of measures presented by the European Commission in July 2021 aims to reduce net greenhouse gas emissions by 55% by 2030 (compared to 1990 levels) and to achieve a climate-neutral Europe by 2050.





To this purpose, 13 guidelines or regulations have been drafted so far, with the help of which the climate targets are to be achieved while at the same time reorienting our economy and society for a just, green and prosperous future.

#### They combine:

• measures from emissions trading for new sectors and stricter requirements under the EU's existing Emissions Trading Scheme (ETS).



The Emission Trading Scheme (ETS) is the trading of certificates that allows the transmission of greenhouse gases to a specific extent. For this purpose, yearly upper limits for the release of greenhouse gas emissions are defined for sectors such as energy-intensive industry and the energy sector. Also, the aviation and shipping industry are going to be priced in future.

Have a look at the following video to get a better insight:

https://www.youtube.com/watch?app=desktop&v=fJrFSLfaeeE

- the increased use of renewable energies
- more energy efficiency
- the faster introduction of low-emission modes of transport and corresponding infrastructure and fuels
- global measures to prevent carbon leakage (Relocation of carbon intensive industries to third countries outside the EU to circumvent existing regulations on greenhouse gas emissions)
- bringing tax policy into line with the goals of the Green Deal
- instruments to maintain and increase our natural CO2 reductions
- NetZeroCities





The mission aims to create around 100 climate-neutral and smart European cities by 2030. These are to act as centres of experimentation and innovation so that all European cities can follow this example by 2050.



#### • Measures in Austria

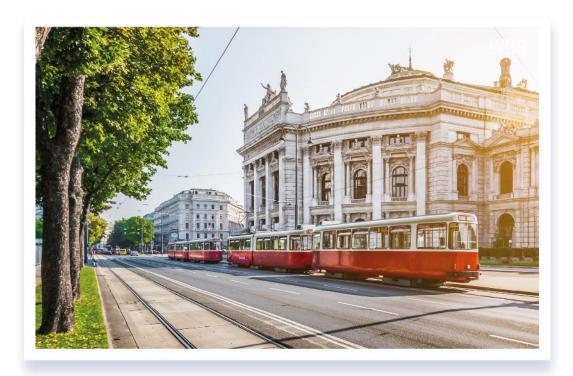
In Austria, the federal government aims to be climate neutral by 2040. To this end, a climate and energy strategy process has been launched that is based on three pillars:

- of decarbonisation
- of energy efficiency
- of renewable energy

The measures include the promotion of renewable energy sources, the promotion of electromobility, the improvement of energy efficiency in buildings and the promotion of innovations in the field of energy supply and use.

Austria also participates in the NetZeroCities project. The cities of Vienna, Linz, Salzburg, Klagenfurt, Villach, Graz, St. Pölten, Innsbruck and Dornbirn have responded to the call.





#### • Measures in Turkey

Turkey aims to reduce greenhouse gases by 41% and reach climate neutrality by 2053. To reach this, legislation on climate change and environment is adjusted. Adaptions to reach the intended goal are strained in the areas of forestry, agriculture, water, public health, disaster risk management and urban and rural development. In total actions are based on 32 objectives and 81 actions.

Turkey is also participating in the NetZeroCities project with Istanbul and Izmir.

#### • Measures in Italy

Italy is working hard in achieving the intended target to be climate neutral by 2050 in course of the European Green Deal. While the country made already a good progression in terms of energy efficiency and lowering emissions, improvements are still required in the area of clean energy technologies. Thus, the focus is on the shift to sustainable energy sources and achieving energy efficiency especially in the building sector.

Italy is participating in the NetZeroCities project as well with 9 cities in total (Padova, Parma, Prato, Bergamo, Milan, Rome, Turin, Bologna, Florence.

All these measures and projects supporting the Green Deal Master Plan act according to the principles of the Green Economy. The objective or measures of the Green Economy are summarised as follows:

- Pollution prevention: e.g. use of environmental-friendly fuel sources in production
- Circular economy: e.g. recycling cans/bottles
- Resource and energy efficiency: e.g. building more energy efficient so that less heating/cooling is required
- Use of renewable raw materials: e.g. using plant fibers for clothing production
- Complete supply through renewable energies: e.g. using only solar or wind energy for energy supply in a company
- Protection of biodiversity and ecosystems: e.g. protected nature areas





- Structural changes: Strengthening the production and consumption of environmentally friendly products and services: e.g. selling of organic and locally produced food in supermarkets
- Inclusion of all economic sectors including services
- Increasing international competitiveness
- "Raw material resilience", by which is meant increasing resilience to fluctuations in raw material availability

# Perhaps you have heard the word "greenwashing" in relation to environmentally friendly production?

The difference between greenwashing and green economy is that greenwashing is a deception, while green economy is a goal that aims to create a more sustainable and environmentally friendly economy.



Greenwashing is when companies portray their products or business practices as environmentally friendly when in fact, they do little or nothing for the environment. Greenwashing can lead to consumers being deceived into believing that they are buying environmentally friendly products or supporting companies that care for the environment when in fact they are not.

While greenwashing aims to create a positive image without actually taking environmentally friendly measures, the green economy aims to create a long-term economy that combines economic growth and environmental protection.



Are you wondering how you can recognise greenwashing? Here are a few typical examples: A company...

- ...claims that its products are environmentally friendly because they are made from recycled materials. In fact, only a small part of the product is made from recycled material and the rest is made from non-renewable sources. Often green logos are used without the product itself actually being environmentally friendly.
- ... advertises a "green" product, but the production or transport of the product causes significant environmental impact that detracts from the positive environmental image of the product. Often products also appear visually as "natural" or "organic" e.g., through green packaging and nature prints on it, but in fact the products are polluted with chemicals and other unhealthy ingredients.
- ...pretends to be committed to environmental protection, for example by making donations to environmental organisations, but at the same time maintains or even increases harmful environmental practices.

In practice, you can recognise greenwashing by checking labels or logos yourself and questioning them critically. In addition to numerous national ecolabels, the EU Ecolabel, for example, offers good orientation or apps like NABU that provide support when shopping.

These examples show that greenwashing can help to mislead consumers by claiming environmentally friendly production when this is not the case. It is important to be aware and support companies that



actually take measures to protect the environment and promote sustainable business practices.



The evolution of the productive economic system towards a green economy is a trend that has been increasingly noticeable in recent years. This trend includes a shift away from the use of fossil fuels and towards renewable energy, as well as a greater integration of environmental concerns into economic decisions.

Another important trend is the promotion of circular economy and sustainable consumption. This involves ensuring that raw materials and materials are used for as long as possible, and that waste is avoided. At the same time, the focus is on developing products and services that are as environmentally friendly as possible and leave a small ecological footprint.



The promotion of jobs in the field of renewable energies and environmental technologies is positive as well. In this context, the importance of education and training is also emphasised in order to meet the demand for qualified workers in these fields.



Overall, it can be said that the green economy is an important trend that will continue in the coming years. Companies that adapt to this trend and develop innovative products and services will be successful in the long run. At the same time, the green economy will also help to protect the environment and improve the quality of life.

# 2.3 What are "green jobs" and what is their significance/relevance?

"Green jobs" are an important part of the global effort to fight climate change and create a more sustainable future. Creating jobs in the environmental sector helps to promote the transition to a green economy and boost the growth of renewable energy and other environmentally friendly technologies.



The International Labour Organisation (ILO) defines "green jobs" as a central component of sustainable development and a response to the global challenge of protecting the environment, shaping economic development and promoting social inclusion.

The ILO is the oldest specialised agency of the United Nations with headquarters in Geneva. It is responsible for developing, formulating and enforcing binding international labour and social standards. The main objectives of the ILO are the promotion of decent work, social protection and the strengthening of social dialogue. You can find the link to this organisation here.

The fastest growing green industries include **solar energy, wind energy, hydropower, biofuels, energy-efficient construction, recycling, and sustainable agriculture**. Green jobs also include the management and maintenance of environmentally friendly infrastructure such as cycle paths and public transport.





It is important that employers and governments work together to create jobs in the environmental sector and provide the necessary skills and training to prepare workers for the changing demands. Creating green jobs offers benefits not only for the environment, but also for the economy and society as a whole.

#### Perhaps you are now asking yourself: Are green jobs actually attractive for employees?

Jobs in the environmental sector have become particularly popular. An example from Austria shows numbers which are typical in the EU. In a representative study commissioned by the Association of Austrian Waste Management Companies (VOEB), 43 percent of those surveyed showed interest in a green job. Among 14- to 18-year-olds, the figure is 60 percent. The work areas of project management, research and development, logistics and laboratory are particularly popular - among both men and women.



The development of green jobs is supported by the growing global demand for environmental protection and sustainable resources. More and more companies, organisations and governments are investing in green technologies and green initiatives to create a sustainable future. Here are some relevant areas and related sample jobs.

Sector	Explanation	Sample jobs in the area
Renewable energies	Jobs in this sector include the manufacture, installation and maintenance of solar systems, wind turbines, hydropower plants and biofuel plants.	Solar technician Wind energy technician Renewable energy electrician Biofuel producer
Energy efficiency	Green jobs in this field involve planning, implementing, and monitoring energy efficiency measures in buildings, transport systems and industrial plants.	Energy consultant Energy auditor Building technician Lighting designer



Sustainable building and renovation	Jobs in this area involve the design, construction, and refurbishment of buildings with the aim of maximising energy and resource efficiency.	Architect for green buildings Construction manager for sustainable building projects Energy engineer Renovation consultant
Waste management and recycling	Green jobs in this area involve the collection, processing, and reuse of waste materials to reduce pollution and waste of resources.	Recycling Manager Waste and Recycling Technician Waste Consultant Sustainability Expert
Sustainable agriculture	Jobs in this area include promoting sustainable agriculture to reduce the environmental impact of food production and minimise the waste of resources.	Agricultural engineer Sustainability Advisor for Agriculture Agricultural technician Organic farmer

Companies can also set up programmes and initiatives to promote sustainable practices and train their employees. Because even positions that don't look like a "green job" at first glance can contribute to more sustainability.

#### Here are some ideas:

• Energy efficiency should be a central aspect of every job. Employees can be encouraged to save energy by turning off unnecessary lighting, computers, or machines when they are not needed. In addition, people should be encouraged to use equipment that has a low energy consumption.



• Every job requires the use of resources, such as paper, water, or energy. It is important to minimise the consumption of these resources and use alternative, more sustainable options. One step can be





to introduce the "paperless office". This involves printing out particularly little to nothing. In addition, it can be pointed out in the email signature that for environmental reasons, please do not print out the email.



• Companies can use sustainable materials in their products or services to minimise their environmental footprint. The use of sustainable business practices, such as the use of renewable energy or the reduction of waste and emissions, also contributes significantly to environmental protection. Employees can contribute to sustainability by ensuring compliance with these practices and suggesting improvements. This should also apply to company gifts and benefits. For example, gifts could be vouchers from companies that offer packaging-free goods.





• Employees can be encouraged to use more environmentally friendly modes of transport, such as public transport, bicycles, or electric vehicles. Companies can also offer car-sharing, home/remote working or hybrid working options to reduce traffic on the road.



These steps are just a few examples of how every job can be made more sustainable. We can all contribute by focusing on sustainable practices and being aware of how our actions affect the environment .





#### But can every job become a green job?

According to specialists from the International Labour Organisation any job can become greener, even in more polluting sectors. Companies can implement green practices to a different extent. Green jobs can either be producing sustainable products and services and/or switching to more sustainable processes. In general the goal is to continuously improve in terms of sustainability and sustainable practices.

## 2.4 Why should I start a career in a green job?

Green jobs involve activities that are designed to protect, preserve and improve the environment. When you work in a Green Job, you can be part of a solution that helps solve the world's environmental problems. You can focus on developing clean energy sources, reducing waste and conserving natural resources.

However, not only environmental responsibility is an essential aspect for taking a green job, but also growth in this field. The demand for green technologies and services is steadily increasing. Many governments around the world have set ambitious climate targets, increasing the need for clean technologies and services. The transition to a sustainable economy also opens many opportunities for new companies and jobs.



Companies that focus on sustainability are often more competitive and have a better image with consumers. If you work in a green job, you can benefit from this competitive advantage. Companies are more often looking for professionals who are knowledgeable about the environment, sustainability and climate change.

## Are you wondering what prospects green jobs offer for your personal career and further development?

Green jobs bring with them many opportunities for personal and professional development. Acquiring new skills and knowledge helps to advance your career. For example, you can work on projects that have a positive impact on the environment, which can lead to a greater sense of purpose and satisfaction. Green jobs require creative solutions to solve environmental problems and promote sustainability. Here you can use your imaginative skills to find and implement innovative solutions.





In addition, you can play an active role in shaping society. You can help make a more sustainable future possible and preserve the quality of life for future generations.



As demand for green technologies and services increases, jobs in this area will also remain stable. Companies that focus on sustainability will continue to grow in the future and will need employees who are experienced in this field.

Green jobs can also provide a good income. As the need for skilled workers in this field grows, the demand for well-educated and experienced workers also increases. This often leads to attractive salaries and benefits.

Overall, a career in a green job offers the opportunity to work in a growing field that is both personally and professionally rewarding and has a positive impact on the environment.

Especially for women, green jobs can be a striking career change. This is because the feminist movement in the green economy is committed to bringing women into the focus of sustainable development and promoting their participation in economic progress.





Women play an important role in developing nature-based solutions that aim to solve environmental problems while promoting social and economic justice. At the same time, the general, societal awareness of ecological sustainability and social justice must be strengthened. In supposed contrast to this is capitalism as a system that often focuses on growth and profit maximisation without regard for the environment and social justice. This system is also known to be male dominated. Women can therefore position themselves in the field of green jobs and in the long-term help create a field that lives gender justice. To this end, there are some initiatives to contribute to a higher number of women and more diversity in and also outside Europe, such as the European Climate Pact, Green Job Initiatives by ILO or call for a "Feminist European Green Deal".



Women Engage for a Common Future (WECF), is a well-known organisation of the Feminist European Green Deal. It campaigns for gender justice and sustainable development, you can find the link here.

## 2.5 Summary

A green economy is an economy that focuses on sustainability and uses resources efficiently. It is about solving environmental problems and creating a better future for all. The biggest current initiative is the Green Deal, which aims for climate neutrality by 2050 in Europe.

To work in the green economy, certain skills are required, such as knowledge in renewable energies, circular economy and environmentally friendly technologies. Soft skills such as teamwork, communication and critical thinking are also important. There are many career opportunities, such as sustainable agriculture, jobs around renewable energy or energy efficiency, or environmental consulting. The green economy is growing fast and there are good job opportunities in this field.





A career in green jobs can be rewarding as they are a growing field of work and there are likely to be more green jobs in the future. Moreover, it can be satisfying to work in a field that has a positive impact on the environment and contributes to solving global challenges. Women can position themselves well in this field, as there are concrete activities and measures to increase the number of women.

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## 3. Training routes and skills

#### 3.1 Introduction

The growing threat of climate change and limited access to natural resources have led politicians and society to focus more on the issue of sustainability. In the past, sustainability was often seen as a cost factor, but this has now changed and the ability to operate sustainably is becoming more and more seen as a competitive advantage.



Ambitious goals have been set at national and European level in recent years, such as the implementation of the "European Green Deal". At the same time, there is a growing awareness in society for sustainable products and services and an increasing demand for them. This results in attractive new business models from which not only the environment, but also consumers and companies can benefit.



The European Green Deal is a package of policy initiatives to transform the EU green to eventually achieve its goal of becoming climate neutral by 2050. The Green Deal was presented by the Commission on 11 December 2019 and includes an interim target of reducing net greenhouse gas emissions by at least 55% by 2030.

In order to make companies prepared for the future, numerous efforts are being made today to provide employees with the necessary skills or to hire people who already have the skills and mindset for the topics of sustainability and the environment. Only sustainable companies are prepared for the future and can be successful in the long term.



#### 3.2 Green Skills. The state of the art.

If a company implements a sustainability strategy nowadays, it is necessary that employees at all levels deal with and engage with the topic of sustainability. This commitment can be promoted both through various internal company initiatives and externally, e.g., through education and training. In this way, not only are existing knowledge gaps closed, but also additional "green" competencies and skills, so-called **green skills**, are taught.



Green skills are competences that enable employees to actively shape the changes in the world of work in the area of sustainability.

In addition to specific knowledge, skills, and expertise, they also include process understanding, combinatorial skills, and personal values such as empathy and one's own attitude.

The three pillars of Green Skills are thus:

- Green Knowledge
- Transferable Skills or "transferable competences"
- Sustainability Mindset or Sustainability Mentality



- Green knowledge is the know-how needed to understand and creatively solve environmental
  problems. Green knowledge is the fuel for eco-innovation and plays a crucial role in the green
  economy and circular economy..
- Transferable skills are any skills and competences that you can transfer from one job to another, regardless of your profession. These can be, for example, personal and social competences such as problem-solving skills, strong communication skills, or the ability to work in a team.
   Methodological competences such as project management, process management, and intercultural working are also examples of transferable skills.
- A sustainability mindset means thinking and acting in an environmentally conscious way. In
  doing so, one takes into account the needs of nature and society and reflects on one's own values.
  One is committed to the well-being of all and acts accordingly.



These qualities are the basis for employees who work on the ecological transformation of the economy. Companies should therefore already pay attention to the green skills of applicants during the recruitment interview.

With the increasing importance of sustainability and environmental awareness in the economy and society, new skills and competences are needed to push this change forward.

Some typical green skills that employees might need are:

- Knowledge of renewable energy and energy efficiency
- Understanding of environmental sustainability and awareness
- Knowledge of circular economy and resource efficiency
- Understanding of sustainable supply and supply chain management
- Ability to analyse and interpret data for sustainability reporting purposes
- Ability to implement sustainability strategies and measures in business processes
- Communication and presentation skills to convey sustainability messages

These green skills will become increasingly important in the future to lead companies in a sustainable and future-oriented way and to implement business models accordingly.

The demand for green skills has increased in recent years as companies and governments around the world have started to step up their efforts to fight climate change and implement sustainable business practices.

The following sectors, which you will now learn about in a little more detail, are instrumental in the green economy and represent areas to focus on in the future:

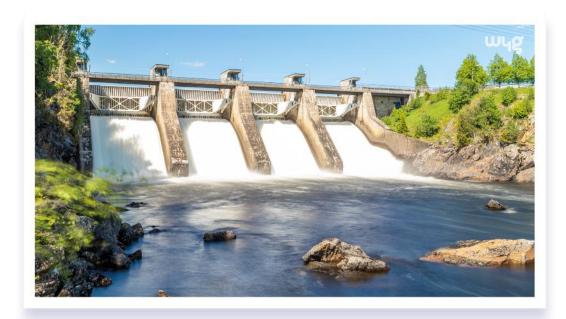
- Renewable Energies
- Green Building or Sustainable Building
- Electric mobility
- Sustainable agriculture
- Sustainable Management



Renewable energies are energy sources that are continuously renewed and do not finish. They are made from natural resources such as the sun, wind, water, biomass and geothermal energy. Unlike fossil fuels, renewable energies are more environmentally friendly because they do not cause harmful emissions and contribute to the reduction of greenhouse gas emissions.

Companies investing in the renewable energy sector are increasingly looking for skilled workers who are able to develop, install and maintain solar power plants, wind turbines, and other renewable energy projects.





In addition, companies try to produce as much of their used energy as possible themselves. This not only saves costs in the long run, but also makes companies more independent, sustainable, and thus more attractive for employees.



IKEA currently uses more than 700.000 solar panels to power its stores around the world. By 2030, their goal is to have 100% of their stores powered by renewable energy.

By 2021, all IKEA-operated factories, packaging and distribution units worldwide were already 100% powered by renewable electricity

#### • Green building or sustainable building

Green building means that buildings are designed in an environmentally conscious way and can still be used efficiently. The relationship between people, environments and the ecosystem is taken into account in order to preserve a liveable world for future generations. The guiding principle of sustainability is followed from the beginning to the end of a building's life cycle - from planning to removal.



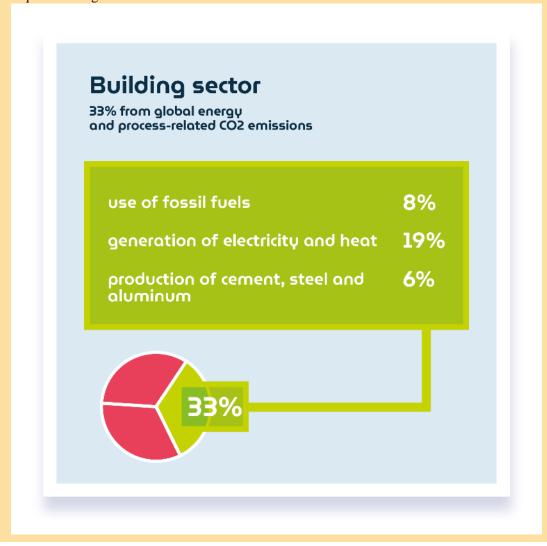


Green buildings are ecological and resource-efficient in terms of energy, water, and materials. They minimise harmful effects on health and the environment. Sustainable building also means building "smart" by using intelligent building technology to use energy and resources efficiently.





According to the UN 2022 Status Report on building and construction, the building sector has a very large carbon footprint when both direct and indirect emissions are considered. In 2021, about 8% of global energy and process-related CO2 emissions resulted from the use of fossil fuels in buildings, another 19% from the generation of electricity and heat in buildings, and another 6% from the production of cement, steel, and aluminium for the construction of buildings. The building sector is thus directly and indirectly responsible for about one third of global energy and process-related CO2 emissions. In order to get a grip on the contribution of buildings and building construction to CO2 emissions, emission restrictions are required throughout the entire value chain.



#### Electromobility

Electromobility has become an essential part of the green economy. On the one hand, to reduce CO2 emissions in transport, on the other hand, to make one's own company more sustainable and less dependent on fossil fuels.





This is how companies can integrate electromobility in the company:

- Provide (free) charging facilities for electric vehicles on company grounds.
- Conversion of the company vehicle fleet to electric vehicles
- Training and further education for employees on electromobility and its technologies
- Integration of electric mobility into operational processes (e.g. deliveries with electric vehicles)



Uber announced the adoption of a comprehensive plan to become an all-electric, zero-emissions platform by 2040. The Green Future programme provides drivers with access to resources to help them transition to electric vehicles by 2025 in the US, Canada and Europe. The goal is for the Uber fleet to be fully electric in the US and Canada by 2030 and in the rest of the world by 2040.

The plan goes beyond ride-sharing and clean cars. Uber is partnering with transit agencies around the world to make public transportation more accessible - another step towards making our planet cleaner and more worth living on. In addition, Uber has also partnered with Lime Bikes and Scooters (already available on the app) for those who want to take a short ride on a zero-emission mode of transport.

#### • Sustainable agriculture

Sustainable agriculture is another pillar in the Green Economy. It helps reduce the negative environmental impacts of food production while maintaining the health of soil, water, and air.

Agriculture-related businesses can take the following actions to operate more sustainably:

- Cultivation of organic products and use of organic farming methods (e.g. avoiding pesticide treatment and mineral fertilizers and using of natural cycles etc....)
- Reduction of the use of chemical fertilisers and pesticidesChemical fertilisers and pesticides are mostly used to increase growth and earnings and keep a constant good quality of food.
- Implementation of circular economy systems (prolonging the lifecycle of things)
- Use of renewable energies for agricultural production





- Promotion of biodiversity (variety in nature consisting of diverse plants, animals etc.) and nature conservation
- Cooperation exclusively with companies that fulfil the above points



The market for alternative proteins is likely to make an important contribution to reducing emissions, although changing people's eating habits will require extensive efforts, especially in terms of consumer education. Alternative proteins can be of plant origin (such as oilseeds or certain cereals) or animal origin (such as insects or animal cell cultures).

Some nutritionists predict that alternative proteins will be common by 2030 and will be offered as an option in most fast food and fine dining restaurants.

Several factors, including changing consumer demand, regulation, and innovation, may influence the extent and speed of adoption.



#### • Sustainable management

Sustainable management is central to the green economy. The main goal is to balance ecological, social, and economic aspects. In other words, it is about managing a company in such a way that it is profitable in the long term and contributes to sustainability at the same time.

So how can sustainable management be integrated into a company? Here are some examples:

- Use of sustainable materials and products in production
- Reduction of energy and resource consumption in the company
- Promotion of employees who are committed to sustainability
- Involvement of stakeholders in the company's decision-making processes
- Implementation of an environmental management system





The best-known environmental management systems are ISO 14001 and the European Eco-Management and Audit Scheme (EMAS). Both systems are widely used.

An environmental management system defines rules for an organization in regard to the environment. According to ISO 14001 it is the responsibilities and processes for environmental protection in a company. It includes the planning, implementation, and control of environmental measures as well as the definition of responsibilities and behavioural guidelines. Companies are setting specific goals in this regard, and corresponding measures are implemented.

EMAS is the short name for the EU's Eco-Management and Audit Scheme. Organisations participating in EMAS not only fulfil the requirements of ISO 14001, but also record main indicators of operational environmental protection, publish an annual environmental statement, and have their management system checked by an accredited environmental expert.





Through transparent communication and the involvement of customers and employees in decision-making processes, the clothing company Patagonia is helping to establish sustainability in corporate management. The company is committed to environmental protection and sustainability and has, among other things, launched a campaign that encourages people to repair and recycle clothes instead of throwing them away. Patagonia also uses renewable energy in production and is involved in various environmental protection projects.

There are several activities in the European Union to promote and develop green skills. The main initiative is the "Pact for Skills". Companies and organisations are encouraged to participate in the Pact for Skills or skills pact to support the training and retraining of workers.

These are the main principles of the initiative:

• Promoting a culture of lifelong learning for all – promotion of learning throughout life





- Building strong skills partnerships aiming at collaboration between different private and public institutions to enable people to acquire new skills
- Monitoring skills supply and demand and anticipating skills needs monitoring and assessing
  what skills are needed on the developing job market and what skills people need to acquire to be
  ready for working life
- Working against discrimination and for equality and equal opportunities providing a fair chance for everyone no matter of their personal background to acquire new skills



- The implementation is carried out through the following measures:
- Best practices and success stories from different European programmes will be disseminated.
- The European Social Fund, which provides training for 5 million people for green jobs and green recovery, will be made more accessible.
- Erasmus+ and other programmes that provide opportunities for developing future- oriented skills and partnership projects will be linked.
- Stakeholders, local authorities, and communities will be encouraged to use the Just Transition
  Fund to support retraining, active inclusion of workers and jobseekers and the creation of new
  employment opportunities.
- Support programmes for higher education institutions wishing to develop and teach curricula on environmental and climate impacts will be identified.





## 3.3 My green skills

Jobs in the field of sustainability are getting more and more important in today's world. Have you ever asked yourself whether you want to take up a green job?

Green skills are values, attitudes, knowledge, abilities and competences that are focusing on environmental protection and sustainability. There are a variety of green skills that are in demand in different areas. Drivers of the green economy in particular are looking for staff with a variety of skills.

The "Green General Skill Index" identifies four groups of work tasks that are particularly important for green jobs:

#### • Engineering and technical skills:

These are hard skills that include competences related to the design, construction, and evaluation of technology, usually mastered by engineers and technicians. This know-how is needed for green buildings, renewable energy design and energy-saving research and development (R&D) projects.





#### Scientific skills

This refers to skills that arise from broad areas of knowledge and are essential for innovation activities, e.g., physics and biology. These skills are particularly in demand at every stage of value chains and in the utilities sector, which provides basic level comforts such as water, sanitation, and electricity.



#### Operations management skills

This describes know-how related to the change in organisational structure required to support green activities and an integrated view of the company through life cycle management, lean production and collaboration with external actors, including customers. Such skills are important for example for sales engineers, climate change analysts, sustainability specialists, sustainability officers and transport planners.





#### • Monitoring capabilities

These are technical and legal aspects of corporate activity that are fundamentally different from engineering or scientific tasks. They refer to skills required to assess compliance with technical criteria and legal standards. Examples include environmental compliance inspectors, nuclear monitoring technicians, emergency management managers and legal assistants.



Additionally, for sure skills related to nature, environment and sustainability are important as well.

Besides the skills mentioned, soft skills are considered crucial, not only in regard to green skills but future important skills demanded in the fourth industrial revolution. Skills like design thinking, creativity,





adaptability, resilience and also empathy are seen as increasingly important.





With all this information, you can now assess for yourself how high your level is to be able to apply green skills in your own job. In addition to self-assessment, there are also online services that provide tests to measure your own green skills.

On the other hand, you can also find guidelines if you want to use green skills in your company or even in your teaching. One example is the ETF - European Training Foundation, an initiative of the EU, an interesting document can be found here.

## 3.4 Training in the field of green jobs

There are several ways to find out if you have skills that are relevant to jobs in the green economy. Here are some ideas:

#### • Research different jobs in the Green Economy

One way to find out what jobs exist in the green economy is by searching online for job vacancies, descriptions of jobs or even by talking to people who work in the industry. Make a list of interesting jobs and note what skills and knowledge are needed for them.



Think about what skills you already have





Reflect on what skills and competences you have already acquired. You may have already gained experience in project management, cross-cutting team building or data analysis. These skills can be beneficial in many jobs within the Green Economy.



#### • Do a competence check

There are online materials and tests that can help you assess your skills and identify which professions suit you best. Green jobs are on the rise and some online skill assessment tools are already focusing on green skills and jobs as well, e.g. www.greennewcareers.org/quiz/.





Would you like to reflect on your existing green skills or see how exactly these competences are assessed and evaluated?

Check out our Women4Green self-assessment that is giving you an insight into your green skills and potential career opportunities that might suit you (soon available).

Interesting further information can be found, for example, in "**GreenComp**", the European sustainability competence framework, or in the OECD's "*Environmental sustainability competence toolbox*".

If you would like to enhance your knowledge in a specific green area, there are different courses available, e.g. on course platforms like Coursera, edX Courses or also LinkedIn.

If you would like to enhance your knowledge in a specific green area, there are different courses available, e.g. on course platforms like Coursera, edX Courses or also LinkedIn.

#### • Internship and volunteer

Do an internship or voluntary service in a green economy company or organisation to get an insight into the different professions and their requirements. Have a look at the platforms of the volunteer services Helpx or Wwoofing. There you can discover global volunteering opportunities on farms, castles or even boats to learn sustainability practices. If you are interested in specific companies, it is best to contact the company of your choice directly and ask about internships or other entry-level opportunities.



#### Educational opportunities

Consider pursuing vocational training or further education in the field of sustainability, the environment or renewable energy. This can help you improve your skills and learn new competencies that are in demand in the green economy. Certificate programmes can be a faster and less expensive alternative to a full degree programme. Many focus on sustainable technologies, renewable energy, environmental management and similar areas, and training is offered both online and offline.





Classically, many universities also offer degree programmes in environmental science, renewable energy, sustainability, environmental engineering, etc.

Basically, it is good if you already have the passion for sustainability and environmental protection. If your eye for it is not yet sharpened, inform yourself about global development. The focus is increasingly on sustainability and renewable energies, so these jobs are particularly crisis-proof and offer opportunities with interesting further development possibilities.

### 3.5 Summary

More and more companies worldwide are committed to sustainability and environmental protection. Many companies have recognised that they have a responsibility to the environment and to future generations, and that sustainability can also make economic sense.

These companies have set themselves the goal of making their business processes as environmentally friendly as possible, using renewable energies and reducing greenhouse gas emissions. They are also committed to social responsibility and fair working conditions along the supply chain.



If you want to pursue a career path in green jobs, you should identify the most demanded skills in advance and reflect yourself on how you can contribute to environmental protection professionally. In education, for example, technical skills, an understanding of renewable energy and waste management skills are in demand. There are also many educational pathways, such as specialised university programmes, certification courses and specific training.

To assess one's green skills, there are tools and services for orientation and skills assessment. This way, one can better assess one's strengths and weaknesses and identify a personal "Green Skill Gap", i.e., one's own knowledge gaps. Often, simple research activities, also online training, and funded initiatives of the EU help to expand one's own competences.

Overall, green skills offer many opportunities for a sustainable career and are an important skill for any person who wants to work towards a sustainable future.





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# 4th Occupational profiles and introduction to the everyday workslife

#### 4.1 Introduction

Promoting a sustainable and environmentally friendly economy is nowadays of primary importance. In this context, green jobs, i.e. jobs related to environmental protection, sustainability, and resource conservation, play a crucial role.

But which green jobs are in particular demand and in which sectors are most green jobs to be found? Together we will look at the latest trends in the current job market to help you pursue a green career. We will also look at tools that can help you apply and identify which green jobs suit you.

In addition, we will look at how every individual worker with green habits can make a lasting impact on the organisational environment.

By gaining insights in these areas, we can all make a significant contribution to creating a sustainable workplace and lay the foundation for an environmentally friendly future.

## 4.2 The most popular occupational groups for green skills

Green jobs can either involve activities to protect the environment or to use natural resources carefully.

In the field of environmental protection, the avoidance of air pollution and waste, the protection of water bodies, or the development of sewage systems are good examples. The protection of animals and plants also falls into this area.

The use of sparing resources is reflected in professions that deal with energy efficiency or the recycling of materials.



The demand for professionals with green skills is influenced by various factors:





- The growing importance of environmental and sustainability issues in business and society.
- Companies are increasingly required by stakeholders (such as customers, investors, and employees) to implement environmentally friendly and sustainable practices, which increases the demand for relevant professionals.
- Increasing regulation and legislation in the field of environmental and sustainability issues also contributes to the demand.
- Furthermore, green skills are also an important factor in developing business models and entering new markets, which further increases the demand for appropriately trained professionals.

Some of the currently most demanded jobs in the field of green skills in the European Union can be found in the following areas:

#### • Sustainability management

Sustainability managers are responsible for developing and implementing strategies to promote sustainability in companies, organisations, and governments. They monitor and assess a company's environmental footprint and work on measures to reduce energy consumption, increase the use of renewable energy and minimise waste.



#### • Energy efficiency

Energy experts are able to plan, implement and monitor energy efficiency measures. The goal is to reduce energy consumption and lower energy costs. They work in various sectors such as building technology, renewable energies, and mobility. Environmental experts help companies reduce their energy costs and achieve their sustainability goals.



#### • Environmental protection

Environmental consultants help companies and organisations to assess, reduce and manage environmental and sustainability risks. This enables companies to become more environmentally friendly and sustainable by optimising processes and reducing the use of resources.



#### • Architecture and building planning

Sustainable architects and building designers specialise in the design and construction of buildings that are energy efficient and have a lower environmental impact. They work to develop sustainable buildings and infrastructure that use renewable energy and minimise waste.



#### • Green Marketing





Experts in the field of green marketing help organisations to market their products and services in an environmentally friendly and sustainable way. They help companies develop brands that are sustainable and environmentally friendly and that address the needs of environmentally conscious consumers.



But be careful, not everything that says "green" on it is really environmentally friendly or sustainable.



Greenwashing refers to the practice of promoting a company's actions, products, or policies as environmentally friendly or sustainable when in reality they are not. This portrays a company or individual as more environmentally conscious than they actually are.

An example of greenwashing would be when a company advertises products as "environmentally friendly" when in fact they are harmful to the environment, or when a company emphasises only one positive environmental aspect while ignoring other harmful practices.

Now that you have got to know the occupational areas in demand with regard to green skills in the EU, we will take a look at six countries Austria, Poland, Czech Republic, Spain, Italy and Turkey as examples in order to shed light on their most demanded green jobs in a practical way.



Please note that the demand for certain green occupations may vary over time and depends on various factors such as government policies, industry trends, and economic conditions. It is always advisable to consult current sources and local labour market reporting for the latest information.

#### Austria

Engineers and technicians for renewable energies

Austria is actively investing in renewable energies, especially wind, solar, and hydropower. Professionals with knowledge in planning, installation, and maintenance of renewable energy systems are in high demand.

• Sustainability consultants for buildings

With the increasing demand for energy-efficient buildings, professionals who can provide sustainable building design and consultancy services are in demand.

• Waste management specialists

Austria attaches great importance to waste management and recycling and is also considered internationally as a country with a lot of know-how in this field. Experts in waste management and recycling technologies are therefore in great demand.





#### **Poland**

#### • Wind turbine technicians

Poland is rapidly developing its wind energy sector and is therefore looking for technicians who can install, maintain and repair wind turbines.

#### • Environmental Engineers

With a focus on improved environmental regulations and practices, there is a need for engineers who specialise in environmental impact, conservation, and sustainable development.

#### • Energy Efficiency Auditors

Poland aims to improve energy efficiency in industry and buildings. Auditors who can assess energy consumption, identify potential improvements, and recommend energy-saving measures are needed.





#### **Czech Republic**

• Solar Photovoltaic Technicians

The Czech Republic is expanding solar energy capacity, creating a demand for professionals who can install, inspect and maintain solar photovoltaic systems.

• Specialists for energy generation from waste

With a focus on waste management and sustainable energy production, experts are sought for waste-toenergy technologies such as biogas and biomass.

• Environmental Analyst

Environmental analysts play an important role in assessing and monitoring environmental impacts, conducting environmental audits, and ensuring regulatory compliance.





#### **Spain**

• Solar Power Engineers

Spain has a strong solar power industry, which means that engineers who can design, develop and manage solar projects are in demand.

• Electric Vehicle Mechanics

As electric vehicles become more popular, there is a need for professionals who are skilled in the maintenance and repair of electric vehicles.

• Sustainable Building Architects

Spain places great emphasis on sustainable architecture and environmentally friendly building practices. Architects with expertise in energy-efficient and environmentally-friendly construction are in demand.





#### Italy

• Energy managers for industrial plants

In Italy, companies above a certain level of energy consumption must appoint an energy manager, so this professional group is particularly in demand.

• Sustainability architects

Not only the economy is increasingly adapt to climate protection in Italy, but architecture is too. Experts who can work and plan with climate-friendly materials are in demand.

• Installers of sustainable thermal systems

Installers are responsible for a variety of work areas. They are involved in advising and installing energy-efficient systems and are thus part of the green jobs.

#### **Turkey**

• Project managers for solar or wind power projects

Turkey lacks natural oil and gas resources, so the country is increasingly turning to sustainable technologies, such as wind energy or other renewable energies.



## 4.3 How to make everyday work green?

Green Habits refer to environmentally friendly behaviours and practices that help reduce the ecological footprint and live more sustainably. Adopting green habits in everyday work life can make every job more green.

In everyday work life, green habits can be implemented in different ways. Here are some examples:

#### **Energy efficiency**

- Be sure to turn off electronic devices such as computers, printers, and lights when not in use.
- Plan for natural lighting and make the best use of daylight to reduce energy consumption. For artificial light, LED lamps are the right choice. Since 2021, energy-saving lamps may no longer be marketed in the EU so almost only LED lights are available anyway.
- In the office, only energy-saving appliances and electronic devices with low energy consumption should be used.
- It is necessary to set heating, ventilation, and air conditioning correctly to optimise energy consumption.

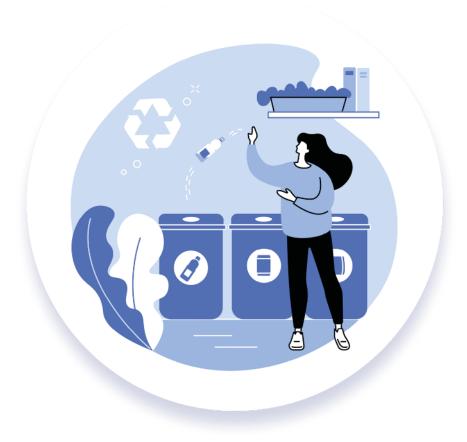


#### Resource conservation and recycling

- Excessive paper consumption should be avoided by giving preference to digital documents and printing only when absolutely necessary. Many companies already have a so-called "paperless office".
- Recycling and reuse systems for paper, plastic, glass, and other waste should be provided and used
  by employees. Excessive use of packaging should be avoided and sustainable, environmentally
  friendly products should be preferred. For example, preference can be given to restaurants that
  offer recyclable take-away containers.



- Companies should motivate employees to reduce water consumption. This should be done by providing information that makes water consumption visible and, at the same time, methods on how to reduce it. Companies should also use water-saving technologies.
- Reusable drinking bottles, cups, and cutlery are the best alternative to avoid single-use plastic. Companies could also specifically hand out such promotional items.



#### Sustainable mobility

- A company should support the use of public transport, e.g., by offering a subsidy for the purchase of a train ticket, helping to organise carpools, or promoting cycling to work.
- Remote working, online meetings, or flexible working hours minimise unnecessary commuting.



• If possible, a company should provide charging stations for electric vehicles and encourage the use of environmentally friendly means of transport.



#### Promote environmental awareness

- You can inform and sensitise colleagues about green practices and encourage them to actively participate. To do this, a company can start programmes and promote initiatives.
- Environmental goals and measures should be created, established, and communicated within the company to promote sustainability. The implementation of these measures should also be rewarded.
- Companies should seek opportunities to work with environmentally friendly suppliers and business partners.

†

Davines, an Italian company that produces sustainable hair and beauty products. They have developed the 'Davines Village', which includes the workplace, gardens and canteen: They have eliminated plastic in the canteen, provide reusable bottles and water fountains for employees, eliminated vending machines and instead offer package-free snacks, eliminated coffee pods, and 100% of the village's electrical energy comes from renewable sources. There is also an interesting podcast on "The Jobs of Sustainability".





Green habits in everyday work can make a significant contribution to environmental protection. By consciously making environmentally friendly choices and integrating them into everyday work, you can have a positive impact on the environment and encourage others to adopt sustainable practices as well.

We are entering an era of "conscious quitting", i.e. quitting one's job based on one's own values. This is primarily about the lack of climate and environmental protection, social justice, or lived diversity. The "2023 Net Positive Employee Barometer" study showed that in the USA and the UK, almost two-thirds of employees believe that companies' efforts to address environmental and social challenges are not satisfactory.

Many people believe that CEOs and managers do not care enough. Almost half of workers say they would consider quitting if the company's values did not match their own, even in difficult economic times. A third of employees say they have already resigned for this reason.

These numbers are even higher for Millennials and Generation  $Z_{\cdot}$ 

Forecasts predict that this trend will also spread quickly in Europe.

## 4.4 Which jobs suit me?

Which career path to choose is a question we all have to ask ourselves sooner or later. However, since external circumstances change, new jobs are added and other jobs disappear, e.g. due to new technologies, this is not so easy to answer. It is, therefore, all the more important to analyse existing professions and job advertisements in order to match one's own preferences and knowledge.



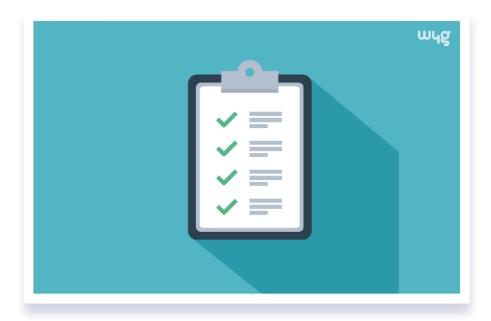


When analysing the profession, there are different dimensions that can be taken into account:

- Specific tasks and responsibilities: what activities are carried out? What skills and knowledge are required?
- Qualifications, skills and competences required for the job: what training, certification, or experience is necessary?
- Working conditions and environment in which the job is performed: for example, is it an office environment, a workshop, or an outdoor environment? Are there any special physical requirements or safety issues?
- Analysis of the type of relationships and interactions that take place in the work environment: is there customer contact, teamwork, or leadership?



• Development prospects and promotion opportunities within the occupational field: what opportunities are there for professional growth and development?



These dimensions should be matched with one's own wishes and the actual job. So, to analyse the job or the specific position, different methods and approaches can be used. Here are some common methods:

Study job descriptions and job advertisements to gather information about tasks, responsibilities, and qualifications.



Hold interviews with professionals in the occupational field to gain insights into the requirements and experiences. Use private contacts here as well to get a look behind the scenes.



Carry out observations at the workplace to understand the actual performance of tasks and the working environment. This can be done, for example, through volunteering.





Consult questionnaires and surveys and statistics to gather information about the experiences and opinions of professionals in the given occupation.

Use data analysis of salary and employment statistics to gain information on employment trends and career opportunities.

Consult a career counsellor, try to work out with them what sustainable job might suit you and how best to achieve it.

By combining these methods, a comprehensive analysis of an occupation can be carried out to get a better understanding of its different manifestations.

Deciding which green job is right for you requires self-reflection and extensive research. Here are some steps that can help you find the right green job:

- Think about what environmental issues or sustainable practices are important to you. What
  motivates you and sparks your interest in relation to environmental and sustainability issues?
- Consider what skills and knowledge you already have and how these can be used in green jobs.
   Also consider your previous experience, including education, training, or internships in relevant fields.
- Conduct extensive research on different green occupations. Read about roles, responsibilities, qualifications, and career opportunities in renewable energy, environmental protection, sustainable



agriculture, green building, and waste management, to name a few.



- Look for opportunities to talk to people in green jobs. You can use networks, online forums, industry events, or career fairs to get first-hand information and insights.
- If you need further support, you can use career guidance. Career counsellors can help you analyse your skills and interests and identify career opportunities that suit you.
- If possible, do internships, volunteering, or part-time jobs in green organisations or companies.
   These practical experiences can help you gain insights into the reality of work and support your decision.
- Take self-tests or self-assessments that help you understand your personal preferences, strengths, and work styles. These tools can help you identify careers that fit your personality.

It is important to be patient and take your time to find the right green profession. Use all available resources and go step by step to make an informed decision.

Now that you have defined your preferences, the next step is to apply directly to the company. The following tools will help you to do this:

- Word processing programmes such as Microsoft Word, Google Docs or OpenOffice allow you to create and format CVs, cover letters and other application documents.
- E-mail programmes such as Microsoft Outlook, Gmail or Thunderbird are important for sending applications by e-mail and communicating with potential employers.





• The service https://europa.eu/europass. As part of the EQF, the EU has created a platform with this initiative where people can create a CV, test their skills and competences and also find job advertisements throughout the EU.



The EQF - European Qualifications Framework for Lifelong Learning - is an instrument to promote transferability between the different education and training systems in Europe. It is intended to help facilitate the recognition of qualifications and competences and to promote labour mobility.

• Use online job boards such as LinkedIn, Xing, Indeed, or StepStone. These platforms offer a wide range of job offers and allow you to create online profiles and upload application documents.





• For job interviews or virtual meetings, tools such as Zoom, Microsoft Teams, or Skype can be used to hold conversations via video.



- If you want to showcase creative work or projects, you can use platforms such as Google Sites, GitHub, or WordPress to create an online portfolio and include it in your application.
- When applying for specific positions, especially in project management, tools like Trello can be helpful to organise the application process and keep track of progress.





Whether you have a computer or just a tablet or smartphone, many companies already offer you the option of creating an online profile or using apps that allow you to apply away from the traditional channels, in addition to the classic application via email. It is important to note that the choice of tools depends on individual needs and the requirements of the respective job advertisement. Check out the vacancy's requirements before using the tools and ensure that the tools chosen are appropriate and professional.

# 4.5 Summary

Knowing about the most in-demand green jobs allows us to set our career goals in line with sustainability and current market trends. By acting in an environmentally conscious way, we can also have a positive impact on the environment in the workplace. Each individual can make a contribution through simple actions such as not using paper, using digital communication tools, promoting energy-efficient lighting, and consciously choosing environmentally friendly options in food.





To find the right green job, it is important to conduct a thorough analysis of the job description. You should consider different perspectives such as tasks, responsibilities, qualifications, work environment, relationships, and career opportunities. By using appropriate tools, you can make the application process efficient and increase your chances of finding the right green job. Continuous training and the willingness to adapt to new challenges promote further development in this growing sector and contribute to the protection of our environment.

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# 5. Detailed job profiles example

# 5.1 Introduction

Green jobs are important today and will become even more important in the future. They are designed to protect the environment and promote sustainable development.



In wind power technology, for example, skilled workers contribute to the switch to renewable energy, reduce the use of fossil fuels and cut CO2 emissions.

The bioeconomy uses sustainable agricultural and forestry practices to use renewable resources and reduce dependence on non-renewable resources.

Eco-design uses innovative approaches to develop environmentally friendly products and solutions, and eco-tourism teaches visitors about the importance of nature conservation, local flora and fauna, and sustainable practices, among other things.

Any person with the appropriate training and understanding of sustainability can work in these professions. Have you perhaps also thought about career opportunities in Green Jobs? We now take a closer look at four different Green Job areas presenting four potential career opportunities in each area. After that you may see career opportunities on your own in the large and exciting field of Green Jobs. The job profiles that we are going to take a closer look at are wind power service technician, eco-designer, bioeconomist and ecotourism guide.



# 5.2 Introduction to the detailed job profiles

The demand for green jobs is continuously increasing as the need for sustainable development becomes more urgent.



The following areas offer diverse opportunities for people interested in a career with a positive contribution to the environment:

- The renewable energy sector includes jobs in the development, installation, maintenance, and
  management of renewable energy sources such as solar energy, wind energy, hydropower,
  geothermal energy, and biomass.
- **Energy efficiency** is about optimising energy consumption and reducing energy waste in buildings, industry, and transport.
- Sustainable transport is concerned with the development and promotion of environmentally friendly transport solutions, such as electric vehicles, public transport, bicycle infrastructure, and car-sharing services.
- **Environmental engineering** develops solutions to address environmental problems and protect natural resources. This can include water and waste management, soil protection, air pollution control, and environmental monitoring.
- **Sustainable agriculture and food production** is about ecologically sustainable agricultural practices, organic farming, sustainable fishing, and the promotion of regional and seasonal food.



- **Sustainable architecture** integrates techniques such as passive solar energy, green roofs, energy-efficient lighting systems, and renewable energy systems. In addition, emphasis is placed on the use of recycled materials, minimising waste, and creating a healthy indoor environment.
- The areas of **environmental education and awareness raising** focus on imparting environmental knowledge and raising awareness of sustainability.



It is important to emphasise that green jobs are not limited to certain professionals. Any person with the appropriate training and understanding of sustainability can pursue a career in these fields. There are a variety of education and training opportunities that allow people to specialise and develop their skills in these jobs.

For example, by choosing a career in wind power engineering, bioeconomics, ecotourism, and eco-design, one can play an active role in addressing environmental issues and make a positive contribution to sustainable development.

From an affinity for technology to a passion for hiking, you will be shown the tasks and requirements for various positions in the field. You will also see why these fields are important for our environment and what you need to start your career there.

In the following, we would like to introduce you to four examples of green jobs in different fields to give you a better idea of green jobs in the skills and opportunities required.



# 5.3 Wind Power Service Technician

Wind Power Service Technicians are responsible for the maintenance, repair, and servicing of wind turbines. Although some wind technicians are involved in the construction of new wind turbines, the majority of their work is to ensure that the turbines remain up and running.



#### Responsibilities, duties, and main features of the position

Maintenance of the turbines include the following sub-tasks:

- **Regular inspection** of the rotor blades is an important part of maintenance. Damage, wear, or cracks on the blades are checked. If necessary, repairs are carried out or blades are replaced.
- Wind Power Service Technicians check various components of the turbine, including the
  generators, gearboxes, brakes, electrical connections, and control systems. Care is taken to ensure
  that they are functioning properly and have no abnormalities or damage.
- The bearings in a wind turbine need regular lubrication and maintenance to ensure smooth operation. Technicians check the condition of the bearings and replenish or replace lubricants as needed.
- Wind Power Service Technicians check the electrical connections, control panels, cables, and other electrical components of the turbine. Defective connections or components are identified and repaired to ensure safe and reliable operation.
- After maintenance, functional checks and test runs are carried out to ensure that the plant is functioning properly and achieving the intended performance parameters.
- Accurate documentation of the maintenance work performed is important. Wind Power Service Technicians prepare reports on inspections, repairs carried out, spare parts, and other relevant information. This documentation is used to track maintenance history and plan future work.





#### The following activities are common for the repair of the turbines:

- Wind Power Service Technicians are responsible for identifying the source of a problem or disruption. This includes investigating faults in the electrical systems, mechanical components, or control systems of the turbine.
- Once the fault is identified, technicians carry out the necessary repairs. This may involve replacing or repairing damaged or faulty components such as generators, gearboxes, control elements, brakes, rotor blades, or electrical connections.
- After the repair, the usual functioning of the wind turbine should be restored. This includes
  inspecting and testing the repaired components to ensure that they function properly and meet the
  intended performance requirements.
- For major repairs, it may be necessary to obtain replacement parts. Wind Power Service Technicians will order the required (and correct) parts in a timely manner in order to carry out the repair work efficiently.
- During repair work, compliance with occupational safety standards is essential. All necessary
  safety measures must be taken to avoid accidents and to ensure personal safety and the safety of
  others.
- Accurate documentation of the repairs carried out is important. Technicians prepare reports on repairs made, parts replaced, procedures used and other relevant information. This documentation is used to track repair history and to assist in future repair work or fault diagnosis.





The job profile in the construction of new wind turbines includes various tasks and responsibilities. Here are some important aspects:

- **Site assessment and planning** (incl. analysis of environmental aspects, ground conditions, wind data, and obtaining permits).
- **Site preparation and logistics** (coordinating construction work, ensuring availability of construction equipment and materials, setting up the construction site, coordinating transport, storage, and assembly of turbine components)
- **Foundation and turbine installation** (supervising the concreting process, ensuring correct placement of foundation anchors, assembling turbine components including the tower, nacelle, and rotor blades)
- **Electrical cabling and grid connection** (laying of electrical cables, installation of transformer stations, compliance with all electrical safety standards).
- **Commissioning and testing** (checking the mechanical and electrical systems, calibrating the control systems, and carrying out performance tests)
- **Documentation and final report** (construction progress, technical drawings, inspection reports, test results, need for future references, maintenance work, and any warranty claims.





#### You may be asking yourself: Why is this job description so important for the environment?

Jobs in wind power service technology make a significant contribution to climate protection for several reasons:

#### • Promoting renewable energy

Wind energy is a clean and renewable energy source that helps reduce the use of fossil fuels and cuts greenhouse gas emissions. By ensuring that wind turbines are functioning properly and are maintained, Wind Power Service Technicians help to maintain a sustainable energy source and promote the expansion of wind energy.

#### • Maximising energy production

Through regular maintenance and repairs, Wind Power Service Technicians ensure that wind turbines operate efficiently and produce the maximum amount of clean energy. Keeping the turbines in optimal condition maximises energy output and reduces the environmental impact of other conventional energy sources.

#### Reduction of environmental impact

Proper maintenance of wind turbines helps minimise potential environmental impacts. For example, regular inspections are important to identify and correct problems such as noise emissions or vibrations at an early stage. This reduces the impact on the surrounding environment and wildlife.

#### Sustainable use of resources

Wind energy is a sustainable energy source because it is based on a renewable resource, namely wind. By ensuring that wind turbines are properly maintained and repaired, Wind Power Service Technicians help to extend the life of the turbines and ensure the sustainable use of this renewable resource.

#### • Contributing to climate protection

By generating clean energy from wind power, wind turbines thus make an important contribution to reducing greenhouse gas emissions and thus to climate protection. It helps to reduce the use of carbon-intensive energy sources (like coal for example) and supports the transition to a low-carbon economy.





#### These are the skills and competences you should have for the job description:

Wind Power Service Technicians are familiar with all wind turbine systems, including structural, mechanical, electrical, control, communication and electronic components, hydraulic systems , and health and safety systems.

The following skills are required:

- Mechanical knowledge: Wind Power Service Technicians must understand and be able to maintain, troubleshoot and repair all mechanical, hydraulic, electrical, and braking systems of a turbine.
- Physical fitness without fear of heights: Technicians must be able to climb ladder systems to the height of the turbine nacelle, often with tools and equipment. Some tower ladders can be 90m to recently 240m high or even higher. Therefore, wind technicians should be able to work for long periods of time without tiring easily. They also have to work in confined spaces to access the mechanical components of the turbine.
- **Physical strength:** Wind technicians sometimes have to lift and climb heavy equipment, parts, and tools. Some weigh more than 25 kilograms so a good basic physical constitution is important.
- Troubleshooting skills: Wind Power Service Technicians have to diagnose and fix problems. If a
  turbine stops producing electricity, the cause must be determined, and the necessary repairs carried
  out.
- Documentation: Wind Power Service Technicians must document and submit reports on the
  results of tests, inspections, repairs, or problems they find while performing inspections and
  repairs. The reports must be clear and concise so that others can understand them.





But how do you achieve the goal of working as a Wind Power Service Technician? Here you will find an overview of educational pathways and general requirements:

The educational path and general requirements for a career as a Wind Power Service Technician can vary **depending on the country and employer**. However, here are some typical educational paths and requirements:

- Training in electrical engineering, mechatronics, energy, and environmental technology or a similar field is usually required. Alternatively, a technical college or university education may also be advantageous. Additional certifications, such as in the field of wind energy technology or occupational safety, may also be an advantage.
- A solid technical understanding and knowledge of electrical, mechanical, hydraulic, and control
  systems is required to understand and maintain the complex equipment and systems of wind
  turbines.
- Practical experience in a related field, such as industrial electronics, electromechanics, or
  maintenance of machinery and equipment, may be an advantage. Experience with wind turbines or
  renewable energies is often particularly valued.
- As working as a Wind Power Service Technician can involve potential risks, a good understanding of occupational safety standards and the ability to follow safety-related procedures is essential.
- The ability to work effectively in a team and communicate with different stakeholders is
  essential. Wind Power Service Technicians often work with other technicians, engineers,
  contractors, and customers.
- Wind Power Service Technicians often work outdoors and in a variety of environments, usually at high altitudes. A willingness to work in changing locations, including shift work and weekends, is sometimes required.

It is important to note that the exact requirements may vary. Employers often offer specific training or development to enhance the knowledge and skills of Wind Power Service Technician.







Once you have completed the relevant training, good career, and promotion opportunities are waiting for Wind Power Service Technicians.

A career as a Wind Power Service Technician can be an exciting and rewarding career, especially given the growing demand for renewable energy.

To advance your career as a Wind Power Service Technician, you can gain additional training and certification. As you gain experience and expertise, you can advance to higher positions. This could include taking on leadership roles in a team of service technicians, coordinating maintenance and repair work, or being responsible for a specific geographical area. There is also the possibility of moving into the planning and installation of wind turbines or into technical consultancy and training roles.



Depending on the country, company, and work experience, you can expect to earn between  $\in$  2,500 and  $\in$  5,500 as a Wind Power Service Technician.

With the growth of renewable energy, there are also opportunities for further development in related areas such as project management, technical sales, or energy consulting.



# 5.4 Eco-Designer

Have you ever heard of the term Eco-Designer? What does this job title mean?



"Eco-design refers to measures in product development that aim to minimise the environmental impact of a product throughout its life cycle without compromising other essential product criteria such as performance and cost". (*Johansson*, 2002)

Eco-designers, also known as eco, sustainability, or environmental designers, are professionals who specialise in incorporating environmentally friendly and sustainable principles into the design process. Their goal is to develop products, systems, and services that have minimal impact on the environment and use resources efficiently. The resulting products/services are developed for various different sectors. The most important principles behind are to save energy and resources, recycle and reuse, use renewable raw materials and guarantee lasting benefit and durability.



## Responsibilities, tasks and main features of the position

The tasks of an eco-designer can vary depending on the industry, organisation and project. For example, some eco-designers specialise in specific sectors such as fashion, architecture, packaging design or product design.

Depending on the context and the field, the tasks may include the following aspects:

• Eco-designers conduct **environmental and life cycle analyses** to assess the environmental footprint of products, processes or systems. They take into account resource consumption, energy efficiency, emissions and waste streams.



- They focus on **sustainable design and develop creative solutions** to integrate environmentally friendly principles into the design process. This includes selecting environmentally friendly materials, promoting energy efficiency, designing for recycling and reuse, and minimising waste and harmful emissions.
- Eco-designers research and select materials that are environmentally friendly and sustainable.
   They consider factors such as renewable resources, recyclability, biodegradability and the use of harmful chemicals.
- They design environmentally friendly products and packaging, taking into account the entire life cycle phases. They look for durability, repairability, ease of disassembly, recyclability and the avoidance of excessive packaging material.
- Eco-designers work closely with other professionals to develop sustainable solutions. They
  communicate their ideas, concepts and recommendations clearly and convey the added value of
  sustainable design.
- They keep up to date with **new technologies**, **materials and trends** in sustainable design. They explore innovative approaches and concepts to push sustainable solutions and expand the boundaries of traditional design.

#### That is why this job is important for the environment!

By putting environmentally friendly design principles into practice, eco-designers play an essential role in promoting sustainable development and protecting the environment for future generations. They are instrumental in addressing environmental challenges and finding innovative solutions to create a harmonious relationship between human activities and nature.



#### Eco-design jobs are important for the environment for several reasons:

- Eco-designers play a crucial role in developing products and systems that use resources more
  efficiently. By selecting sustainable materials, designing for recycling and reuse, and reducing
  waste and emissions, they help to reduce the consumption of natural resources and minimise
  environmental impact.
- Energy efficiency is promoted through the **development of energy-efficient products** and the optimisation of production processes. This helps to reduce energy consumption and greenhouse gas emissions, which in turn combats climate change and reduces environmental impact.



Eco-designers help reduce the amount of waste that ends up in landfills or pollutes the
environment by designing products with longer lifespans, reparability, and recyclability. They
also encourage the shift to circular economy models where products and materials are recycled or
reused at the end of their life.



- Eco-designers emphasise the **selection of materials that are free of harmful chemicals** or those that could affect the environment and human health. In doing so, they contribute to the prevention of water pollution, soil contamination and other negative impacts on the environment.
- Through their work, eco-designers help raise awareness of environmental issues and promote the
  need for sustainable living and consumption habits. They inspire businesses, consumers, and other
  designers to make environmentally friendly choices and bring about positive change towards a
  sustainable future.

# Are you wondering what it takes to become an eco-designer? These are the skills and competences you should have:

To be successful as an eco-designer, various skills and qualifications are beneficial. Here are some important skills you should have:

- **Sustainability awareness**: for eco designers it is important to be aware of the principles of sustainability to design products that are environmentally friendly.
- **Design competence**: the designed products do not only have to be sustainable, but also functional, attractive in its appearance and of course user-friendly
- **Technical understanding**: basic technical understanding provides valuable knowledge for the design of sustainable ecofriendly products
- **Technical knowledge** in areas such as material sciences, production processes, energy efficiency, recycling technologies, and renewable energies
- Analytical skills: it is crucial to be able to assess the potential environmental impact and optimize processes accordingly.
- **Research skills**: developments are fast in nowadays world eco designers need to have research skills to keep updated with the latest trends and innovations





- **Problem-solving skills**: eco designers need to find creative solutions to comply with sustainability and eco-friendliness as well as design, attractiveness and user-friendliness
- Communication skills: : although basic knowledge in different areas is beneficial eco-designers have to collaborate with other professionals throughout their work to be most efficient.
- **Ability to work in a team**: although basic knowledge in different areas is beneficial eco-designers have to collaborate with other professionals throughout their work to be most efficient.
- **Flexibility and adaptability**: as mentioned already developments are fast and thus it is not only important to stay up to date but also to be flexible to adapt in any case.





#### How to reach your goal - this is the educational path and the general requirements:

The educational path for a career as an eco-designer can vary, as there is no specific standardised educational programme (yet). Moreover, specific requirements vary depending on the employer, specific role, and industry.

Nevertheless, there are several pathways that can lead to a position in eco-design and provide a solid foundation for jobs in this wide-ranging field.

Here are some possible educational paths and general requirements:

- A degree in a relevant field such as industrial design, environmental design, product design, architecture, environmental science, or a similar field is often a good starting point. Such a degree provides a solid foundation in design principles, sustainability, and environmental science.
- Master's degree: A Master's degree, especially in a specialised field such as sustainable design, ecological design, or green design, can provide additional expertise and qualifications. A Master's degree can also have a positive impact on career prospects and the opportunity to specialise.
- In addition, there are various **further education programmes and certifications in the field of sustainable design** that can provide specific expertise. Again, the requirements vary depending on the industry, position, and employer.



## Careers in Eco-Design and opportunities for advancement.

To build a successful career in the field of sustainable design, there are various opportunities and career paths:

- In addition to **industry-relevant education and training, work experience** is also an advantage. Gain practical experience by participating in projects with a sustainable focus, completing internships, or working in companies that specialise in sustainable design.
- Consider **specialising in a particular area of sustainable design** that interests you the most. Specialising can strengthen your expertise and give you a competitive edge.
- Build a **network of contacts** in the industry by attending professional conferences, seminars, and workshops. Make connections with other professionals, potential employers, and industry experts.





- Keep up to date with current trends, developments, and best practices in sustainable design.
   Read journals, blogs, and relevant literature, attend trainings, and stay informed about new technologies, materials, and regulatory requirements.
- Take initiatives on your own and realise projects to expand your skills and portfolio. This may
  include entering design competitions, writing case studies, or working on your own sustainable
  design projects.



**Prize** annually in cooperation with the International Design Centre Berlin (IDZ). The highest state award for ecological design is presented in four categories: product, service, concept, and newcomer. In addition to design innovations, technical and social innovations are also in demand.

You can work in eco-design in many companies and industries as long as the company is willing to make its products, services, and processes greener and more sustainable.

#### Here are some **possible career paths**:

- Eco-Design Consultant for sustainable design in consulting companies or design agencies
- Sustainable product designer or developer in companies that design and manufacture environmentally friendly products
- Environmental manager or sustainability officer in companies that want to make their processes and products more sustainable
- Sustainable architect or civil engineer specialising in green building and sustainable architecture
- Researcher or developer in the field of green materials

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Depending on the country, company, work experience, and job profile, you can expect a salary of between  $\in$  2,000 and  $\in$  5,000 as an ecodesigner.



# 5.5 Bioeconomists

Bioeconomy is an economic system based on sustainable use of biological resources. It involves the production, processing, and use of biological materials such as plants, animals and microorganisms to produce a variety of products, services, and energy sources.



Bioeconomy aims to establish an alternative way of doing business that is not only based on fossil raw materials but on renewable biological resources. By using biological materials and processes, various sectors such as agriculture, forestry, fisheries, the food industry, the pharmaceutical and chemical industries, and energy production can be made more sustainable. Have a look at the following video to get a good insight: <a href="https://www.youtube.com/watch?v=2xvXkOMRTs4">https://www.youtube.com/watch?v=2xvXkOMRTs4</a>

It is important to note that the bioeconomy should also take into account ethical and social aspects to ensure that it meets the principles of sustainability, social justice, and environmental protection.



Are you wondering what the responsibilities, tasks, and main features of a job in the bioeconomy are?





The bioeconomy is concerned with the research, development, and implementation of sustainable economic models and strategies based on biological resources. The exact responsibilities, tasks and main features of a job in the bioeconomy may vary depending on the work environment and specialisation. Here are some general aspects:

#### • Research and development

Bioeconomists conduct research to understand the potential of biological resources and develop innovative approaches for their sustainable use. They may research and analyse new production methods, technologies, or products.

#### Policy advice and policy making

Governments, international organisations, and companies are supported in the development and implementation of bioeconomy policies. Bioeconomists provide expertise and recommendations to promote sustainable practices and policies.

#### • Sustainability assessment

Bioeconomists analyse the economic, social, and environmental impacts of bioeconomic activities. They conduct assessments to evaluate the sustainability of processes, products, or business models and make recommendations for improvements.

#### • Project management

Bioeconomists can work in projects that involve the implementation and evaluation of bioeconomic concepts and strategies. They plan, coordinate, and supervise the implementation of projects and often work with interdisciplinary teams.

### • Business development and market research

Through the work of bioeconomists, companies can identify and develop new business opportunities in the bioeconomy. Tasks include market research, identifying potential customers and partners, and evaluating market opportunities.

#### • Education and public relations

Bioeconomists often play a role in educating and raising public awareness of the principles and benefits of the bioeconomy. They may provide training, lead workshops, or help create educational materials and programmes.



A closer look at the ways of doing things in the bioeconomy shows that there is often discrimination against various groups in the process, e.g., women, small farmers, or indigenous peoples. Examples of this can be found in the palm oil industry, among others. Here, women mainly work in the field, while men can take up higher positions.

There are already various projects that address this issue and want to demonstrate or ensure that bioeconomy should not be limited to the question of how we move from a fossil-based to a bio-based economy. Rather, long-term, and sustainable approaches should be thought of that live bioeconomy inclusively and fairly.



#### Do you want to know why bioeconomy is so important for the environment?

A central goal of the bioeconomy is to promote resource efficiency, reduce the use of chemical substances and reduce dependence on non-renewable raw materials. By integrating biotechnological approaches and innovations, bio-based materials, bioenergy, and biofuels, for example, can be developed.

The bioeconomy also offers solutions to environmental problems such as climate change and biodiversity loss. It can help reduce greenhouse gas emissions, reduce the environmental footprint of industry, and promote sustainable agricultural and forestry practices.

In addition, the bioeconomy opens up new economic opportunities by supporting job creation in research, development, and production of bio-based products and technologies.

A career in the bioeconomy offers the opportunity to raise awareness of environmental issues and develop innovative solutions to environmental problems. Through research, education, and outreach, bioeconomists can help promote environmentally conscious thinking and action in society. This also includes taking a critical look at processes and organisations and ensuring that work is truly sustainable in the long term and not just focused on "economics", i.e., making money (quickly).



#### As a bioeconomist, you should have these skills and competences:

- Understanding of biological processes: knowledge about biological processes is crucial for using biological materials in the production of products, services and energy sources.
- Knowledge of economics, sustainability, and the environment: knowledge in these areas is important as well to choose proper options and make informed decisions
- Analytical skills: analyzing and evaluating facts as well as understanding the market is important to make decisions
- Project management skills: diverse actors from different fields are going to be involved for the final product/service, this is coming along with tasks like planning, organizing and coordinating
- Interdisciplinary thinking: thinking across different disciplines (biology, environment and economy) is important to find the most appropriate solution
- Understanding of complex interrelationships Translation into action strategies
- Flexibility: due to the fast pace in this field, bioeconomists need to stay flexible



- Ability to innovate: innovation is definitely a crucial part in bioeconomics; innovation can be about new materials, production processes or products
- Commitment to sustainability: a main emphasis in the work of a bioeconomist is the promotion of sustainability in ever aspect

Would you like to know how to achieve your goal of working as a bioeconomist? Here you will find an overview of the educational path and general requirements:

To get a job in the bioeconomy, there are different educational pathways and requirements, which in turn can vary depending on the specific position and work environment.

Here is some general information on this:

- A Bachelor's or Master's degree in a relevant field of study is often a prerequisite for a career in the
  bioeconomy. Courses that may be relevant to this field include agricultural sciences, biology,
  biochemistry, environmental sciences, forestry, sustainability studies, economics, or related
  fields. Some universities also offer specific degree programmes or concentrations in bioeconomics.
- After an undergraduate degree, additional postgraduate programmes or master's degrees specific to the bioeconomy can be taken. These can provide deeper knowledge in areas such as sustainable resource use, circular economy, environmental management, or bioeconomy policy.
- **Internships or professional experience** are usually an advantage to qualify for a job in the bioeconomy. Internships at companies, research institutions, or governmental organisations can provide hands-on experience in the application of bioeconomy principles and techniques.
- Engage in research projects or publish articles in scientific journals to demonstrate your expertise and interest in the bioeconomy. This can also help build your professional reputation in the field.
- As the bioeconomy combines different fields such as biology, economics, environmental sciences, and politics, interdisciplinary skills are an advantage. The ability to work with many stakeholders, understand complex issues, and integrate different perspectives is very relevant in the bioeconomy.



Good career and promotion opportunities are waiting for bioeconomists!



It is important to be aware of the specific requirements and qualifications sought by potential employers in the bioeconomy in order to tailor your education and professional experience.

In addition, specific requirements may vary depending on the position, such as experience in project work, knowledge of specific analytical or modelling techniques, project management skills, or knowledge of policy advice.

Please note that you will only see a selection of jobs here. The bioeconomy is a modern, broad field and accordingly, there are many other interesting and diverse employment opportunities. Depending on your interests, skills, and specialisation, you can follow a career path that suits your individual ideas.



Here are some of the careers you can pursue as a bioeconomist:

## Agronomist

A person that is specialized in sustainable agriculture and crop production. They are cooperating closely with farmers.

## Biotechnologist

A scientist who is working with living things like bacteria and cells to develop useful products and supports environmental protection with the development of new environmental-friendly technologies.

### • Sustainability consultant

A person that is advising companies to become more sustainable throughout their daily business.

#### • Environmental manager

A person in a company responsible for environmental matters (e.g. meeting given standards, application of rules and laws, planning and checking environmental-friendly processes etc.).

#### • Resource economist

A person that analyzes and monitors environmental and economic trends and assess the use of natural resources. He/she is working on balancing economic needs and the preservation of the environment, thereby contributing to policy development and recommendations and strategy adaptions.

#### • Sustainability analyst

A person that collects data and information and analyzes a company in terms of sustainability. Additionally, indicators for improvement are defined as well.





• Bioprocess technician

A person that is working with technologies in bioprocessing (using living things for the development of products in the following industries for example: food, cosmetics, pharma industry).

• Researcher in the bioeconomy

A person that is focusing on research in biological resources.

• Product manager for sustainable products

A person in charge of managing the development and sale of environmental-friendly proeducts

• Business developer in the bioeconomy

A person responsible for opening up new business opportunities in the field of bioeconomy.



Depending on the country, company and work experience, job profile and specific training, you can expect a salary of between  $\in$  2,800 and  $\in$  6,000 as a bioeconomist.

The bioeconomy is a constantly evolving field. It is important to stay up to date and continuously expand your expertise through further education, participation in conferences, workshops, and networks.



# 5.6 Ecotourism Guide

Tourism is a lucrative source of income for many countries. The price for this is high in the long run, because tourism also brings environmental damage, for example through the consumption of energy and the emission of air pollutants.



Tourism thus becomes a complex issue within which numerous areas such as mobility, accommodation, and catering have to be considered in relation to environmental impacts.



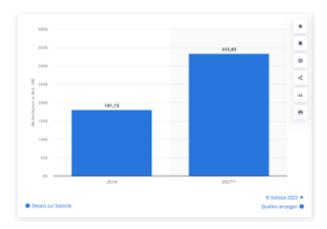
Ecotourism or sustainable tourism is defined as.

"...responsible travel to natural areas that preserves the environment, maintains the well-being of local people and includes outreach and education. " (*The International Ecotourism Society (TIES)*, 2015).

In the long term, ecotourism offers market-oriented solutions and creates effective economic incentives for the conservation and promotion of biocultural diversity. It also contributes to the protection of nature. **Ecotourism thus promotes understanding and appreciation of nature, local society, and culture**.

In the coming years, the market volume in the field of eco-tourism will show a significant increase. In 2019, the global market volume of eco-tourism was around 181 billion US dollars. Expert:ins, however, forecast that it will increase to around 334 billion US dollars by 2027. This would correspond to an almost doubling of the market volume.





Global eco-tourism market volume\* in 2019 with a forecast for 2027 (in billions of US dollars, source: statista.com)

## Are you wondering what the responsibilities, tasks, and main features of jobs in ecotourism are?

Protecting the natural environment is at the heart of ecotourism responsibilities. This includes the protection of ecosystems, the conservation of biodiversity, the protection of endangered species, and the conservation of natural resources.

- People working in ecotourism are often responsible for promoting and implementing sustainable
  practices. This includes promoting environmentally friendly behaviours such as energy and
  water conservation, waste reduction, and recycling. Helping local communities to use their
  resources sustainably can also be part of the responsibility.
- An important aspect of ecotourism is the education and awareness raising of visitors. Jobs in
  this area often involve providing information about the natural environment, cultural heritage, and
  sustainable practices. This can be done through guided tours, interpreting, training, or information
  materials.
- **Ecotourism guides** lead excursions, walks, or boat trips that inform visitors about the environment and sustainable practices to minimise disturbance or damage.
- Local culture and traditions are respected and lived in ecotourism. This includes the involvement
  of the community and regional economy in decision-making processes, the protection of
  cultural sites, and the promotion of local handicrafts and traditions. In addition, it should be
  ensured that income opportunities are created for local people and that they benefit from the
  advantages of tourism.

It is important to note that the implementation of these responsibilities is often done in close cooperation with other stakeholders such as government agencies, NGOs, and tour operators.

Therefore, this job is important for the environment!



Overall, jobs in ecotourism help to promote responsible and sustainable tourism that takes into account both the protection of the natural environment and the well-being of local communities.



Through their responsibilities and activities, ecotourism workers play an important role in creating a balance between tourism and nature conservation:

- The tourism sector can have significant environmental impacts, such as energy consumption, water
  and resource scarcity, waste management, and pollution. Ecotourism guides work to minimise
  these impacts by promoting sustainable practices and implementing environmentally friendly
  standards.
- By **protecting natural habitats**, biodiversity, and endangered species, ecotourism jobs help to conserve and protect natural diversity.
- Ecotourism promotes environmentally friendly practices and **involves local communities**. In this way, employees in this field contribute to long-term environmental, social, and economic stability in the region.
- Jobs in ecotourism provide opportunities to educate visitors about the importance of environmental protection and sustainable practices. Through **education and awareness-raising**, they can raise awareness of environmental issues and encourage behavioural change among visitors.
- By protecting cultural heritage and engaging communities in tourism, ecotourism workers can contribute to the **preservation of cultural identity and community growth.**

#### Are you wondering what skills and competences are needed in ecotourism jobs?

Being an ecotourism guide requires certain skills to provide tourists with a quality and sustainable experience.

These skills help an ecotourism guide to create a positive and sustainable experience for visitors while promoting the protection of nature and culture.

Ecotourism guides should have the following competences:

Passion for nature and environmental protection, environmental awareness: guides with a genuine
passion for nature and environmental protection can inspire and educate tourists about the
importance of conserving natural habitats and biodiversity.





- Knowledge of local culture and history and general interest in the region: knowledge of these
  aspects allows guides to provide a more comprehensive and immersive experience, connecting
  guests with the local community and its traditions.
- Knowledge of local flora, fauna, and culture: this enables guides to offer insightful information about the ecosystem and its inhabitants, enhancing the educational aspect of the tour.
- Communication skills: effective communication is key to delivering information in an engaging and understandable manner.
- "Outdoor skills" such as conducting hikes, orientation in the field, first aid and other safety
  aspects: these skills are vital for ensuring the safety and well-being of guests during outdoor
  activities.
- Knowledge of environmentally friendly behaviours, energy and water conservation, waste
  management and other sustainable practices: by demonstrating how to minimize impacts on the
  environment guides help promote a culture of responsibility and sustainability among tourists.
- Customer care and service orientation, kindness, helpfulness: excellent customer service enhances the overall satisfaction and enjoyment of the tour, encouraging positive reviews and repeat visits.



# How to reach your goal - here you can find the educational path and general requirements for jobs in ecotourism:

The educational path for an ecotourism guide can vary depending on the country and specific requirements. However, there are some general education and qualification paths that can be beneficial for this job:

- A Bachelor's degree in environmental science, conservation, tourism management, geography or a related field can provide a solid foundation, but is not mandatory. There are also specific degree programmes that specialise in sustainable tourism or ecotourism.
- It may be beneficial to take additional certifications or courses in areas such as nature guiding, environmental education, first aid, sustainable management, and interpretation of nature. These additional qualifications can enhance the expertise and skills of an ecotourism guide.
- Practical experience is essential to be successful as an ecotourism guide. Internships, volunteering
  or employment in related fields such as conservation organisations, national parks or ecological
  reserves can offer valuable experience and knowledge.



• You may also come directly from the region and therefore have **special local knowledge** and/or be able to complete training in a local tourism business.



#### A career in ecotourism offers a wide range of development opportunities!

**Entry** into ecotourism can be through various positions such as nature or tour guide, environmental educator, customer service, sustainable management or volunteering in conservation organisations. These positions offer the opportunity to gain practical experience and acquire in-depth knowledge of the sector.

Specific knowledge and skills can be acquired through **participation in training, certification programmes or advanced training**. There are programmes that focus on areas such as sustainable management, nature interpretation, sustainable development, or environmental education. Further education can improve career opportunities and facilitate access to higher positions.



Depending on the country, company and professional experience, job profile and specific training, you can expect a salary of between  $\in$  1,200 and  $\in$  4,500 as an employee in ecotourism. The range of possible salaries is relatively wide according to the variety of job opportunities from guide to project manager.

With increasing experience and expertise in the field of ecotourism, opportunities may arise to advance to leading positions. This may include roles in ecotourism management, operational management of an ecotourism business or project management for sustainable tourism. In these positions you would be responsible for strategic planning, management of resources, development of sustainable programmes and coordination of the whole operation.





Another option is to **start your own ecotourism business**. By identifying gaps in the market, developing sustainable business models, and creating unique ecotourism offerings, you can build your own business. This requires entrepreneurial skills, a willingness to take risks and a sound knowledge of the ecotourism sector.

For those with an interest in academic research or consultancy, career paths may be open in ecotourism research, environmental consultancy or sustainable development policy and best practice development. In these roles, one can be involved in research projects, provide expertise and recommendations to the sector, or act as an independent consultant to governments, organisations, or businesses.

It is important, as in most professions, to network, connect with professionals in the sector, attend conferences and events, and keep up to date with current developments in ecotourism. This can help to discover career opportunities and develop in the industry.



# 5.7 Summary

Green jobs offer a wide range of career opportunities for people with different skills and interests.

In wind power engineering, bioeconomy, ecotourism, and eco-design, the focus is on developing and implementing environmentally friendly solutions. It is also about using renewable energy, using natural resources efficiently, protecting biodiversity, and making ecologically responsible decisions.

In addition, these areas also have an economic component. They offer opportunities for innovation, growth, and employment in the context of a sustainable economy. By using environmentally friendly technologies and practices, these sectors can help create green jobs and promote sustainable development.

To sum up, wind power technology, bioeconomy, ecotourism, and eco-design are closely linked as they are based on common principles of sustainability and environmental protection. They offer people the opportunity to work in areas that have a positive impact on the environment and contribute to the creation of a sustainable future.

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# **Terminology**

The following table provides you with a more detailed description of some technical terms not explained in much detail within the contents.

Gender segregation	Separation of persons according to their biological sex.
Gender stereotypes	General idea about the attributes, characteristics, behaviors and roles of girls/women and boys/men.
Inclusion	All persons should be able to join, no matter how different they are.
Emissions	Substances that are released into the atmosphere (e.g. from a car).
CO2	This is short for Carbon Dioxide which is a gas in the air that is color- and odourless. CO2 is one of the main greenhouse gases, stemming e.g. from the burning of fossil fuels. CO2 is also absorbing radiation in the atmosphere and thus contributes to global warming (same as methane). https://www.youtube.com/watch?v=fStmxIfwXeI
Economy	The system of production, distribution and consumption of goods and services.
Ecology	Its about how plants, animals and the environment affect each other.
Climate-friendly economy	Development of businesses and jobs that do not harm the planet and its climate.
Consumption patterns	The way people buy and use things, like food, clothes, and electronics.
Product Life Cycle	This describes the cycle of a product. This includes the initial idea, the design, the prototyping, the creation, the usage and the end of usage (recycling, discard).
Financing Model	A way of planning how to pay for things (products, services, businesses, projects).
Clean technologies	Technologies that do not harm the environment (e.g. solar panel, electric cars).
Disposable Economy	A general way of living in which everything is immediately thrown away after usage.
Greenhouse gas emission	This are gases in the atmosphere that trap heat. This further on leads to global warming and climate change.
Decarbonization	The process of reducing the amount of CO2 and other bad gases that are released into the air.
Ecosystem	A community of living things that live and interact with each other in one common environment.



Energy efficiency measures	Ways to use less energy, like LED light bulbs or improved isolation.
Ecological footprint	It's a way to measure how much a person affects the environment with their way of living.
Combinatorial skills	Being able to combine different pieces of knowledge, ideas, or elements in new and creative ways. This skill is crucial for problem solving and coming up with new innovative ideas.
Fossil Fuels	Natural fuel such as goal, natural gas or oil that we burn for energy and pollutes the environment.
Renewable energy	Energy that is derived from sources that do not finish, like sun, wind or water.
Pesticides	Chemicals used to kill bugs or weeds that harm plants or crops
Design thinking	A creative way to solve problems by understanding people's needs and developing models to test ideas and find what works best.
Stakeholder	Anyone who can be affected by or has an effect on a project or business, like workers, customers, or the community.
Flora and Fauna	Flora" means all the plants in an area, and "fauna" means all the animals in an area.
Hydraulisches System	A system that uses liquid under pressure to move machines or parts of machines.

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