**MODULE 3:** Renewable Energy: The Path to a Greener Future

## "Green Job Growth"

# Small-scale partnership in the field of youth 2022-1-DE04-KA210-YOU-000080968





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### ABOUT THE PROJECT

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

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



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## PROJECT CONSORTIUM











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#### Introduction

Renewable energy – is a hot topic that has been discussed around the world for quite some time, but it seems like it only becoming more and more popular and even more urgent. Why? In this Module, we are aiming to equip the Youth Workers with the comprehension of the demand for renewable energy, not only from the ecological but also from the political, social, and economic perspectives. Analyzing the existing technologies, understanding current challenges, and potential threads will help to clearly see that despite all its popularity, this sector still has room to grow and improve, which in turn reflects the constant need for interested specialists who are ready to find solutions and offer new ideas. We also will focus on the advantages and perspectives that the sector of renewable energy has to offer to society as well as individuals. We will talk about the job opportunities and doors that renewable energy opens in long-term perspectives.

#### Why renewable energy?

Whether wind, solar or hydropower - renewable energy is booming worldwide. Sun, wind, water, biogas and biomass are readily available and can sustainably supply us with clean energy.

Renewable energy is energy derived from natural sources that are replenished at a higher rate than they are consumed. Sunlight and wind, for example, are such sources that are constantly being replenished. Renewable energy sources are plentiful and all around us. Fossil fuels - coal, oil and gas - on the other hand, are non-renewable resources that take hundreds of millions of years to form. (https://www.un.org/en/climatechange/what-is-renewable-energy)

Important note: the terms 'green energy', 'clean energy' and 'renewable energy' are often used interchangeably, but there is a key difference between them.

Clean energy produces electricity without emissions. However, its manufacture or maintenance can sometimes have a 'carbon cost'. For example, natural environments have to be cleared to create hydroelectric plants with a dam, and the work to construct them often creates carbon emissions.

Green energy comes from totally natural sources, which have low or no environmental impact in their creation or use. (<u>https://www.nationalgrid.com/stories/energy-explained/what-are-different-types-renewable-energy</u>)

They can both be renewable, which essentially means that they come from a source that can't be depleted. So, while most green energy sources are renewable, not all renewable energy sources are considered green.





What's the urgency about renewable energy? Why is it such a hot and actively discussed topic today? If the world is to meet the 2015 Paris Agreement target of limiting global warming to a maximum of 1.5 °C, we absolutely have to act faster. As the latest IPCC report Climate Change 2023 makes clear, every incremental rise in temperature increases the risk of catastrophic events. And every region in the world is behind schedule on decarbonization, as revealed by the recent Global Energy Transition Readiness Index by Siemens Energy association report produced in with Roland Berger. (https://www.siemens-energy.com/global/en/priorities/decarbonization.html)

Renewable electricity is a big part of the solution, and the good news is that generation is being stepped up substantially. In 2020, renewables accounted for 82% of global generation capacity expansion. And global investment in renewable energy reached a record high of 500 billion USD in 2022.

According to the article prepared by the United Nation, energy is at the heart of the climate challenge – and key to the solution. A large chunk of the greenhouse gases that blanket the Earth and trap the sun's heat are generated through energy production, by burning fossil fuels to generate electricity and heat. Fossil fuels, such as coal, oil and gas, are by far the largest contributor to global climate change, accounting for over 75 percent of global greenhouse gas emissions and nearly 90 percent of all carbon dioxide emissions.

The science is clear: to avoid the worst impacts of climate change, emissions need to be reduced by almost half by 2030 and reach net-zero by 2050.

In this article United Nations also provide reasons powered by the statistics, why accelerating the transition to clean energy is the pathway to a healthy, livable planet today and for generations to come:

# 1) 90% - Percentage of world's electricity that can come from renewable energy by 2050.

About 80 percent of the global population lives in countries that are net-importers of fossil fuels - that's about 6 billion people who are dependent on fossil fuels from other countries, which makes them vulnerable to geopolitical shocks and crises. In contrast, renewable energy sources are available in all countries, and their potential is yet to be fully harnessed.

Renewables offer a way out of import dependency, allowing countries to diversify their economies and protect them from the unpredictable price swings of fossil fuels, while driving inclusive economic growth, new jobs, and poverty alleviation.

#### 2) 85% - decrease in cost of electricity from solar power from 2010-2020.





Renewable energy actually is the <u>cheapest power option</u> in most parts of the world today. Prices for renewable energy technologies are dropping rapidly.

#### 3) 99% - Percentage of world's population breathing polluted air today.

According to the World Health Organization (WHO), about 99 percent of people in the world breathe air that exceeds air quality limits and threatens their health, and more than 13 million deaths around the world each year are due to avoidable environmental causes, including air pollution.

#### 4) 30 million – Number of jobs that can be created in the renewable energy and lowemission technologies by 2030.

As we can conclude from the statistics above, renewable energy provides undeniable advantages in many areas, from obviously ecological advantages, to better health and economic situation in the countries around the globe.

Becoming the world's first climate-neutral continent by 2050 is the objective behind the European Green Deal, the very ambitious package of measures that should enable European citizens and businesses to benefit from sustainable green transition.



Image: <u>https://euinasean.eu/eu-green-deal/</u>

The overarching aim of the European Green Deal is to reach net-zero greenhouse gas emissions within the EU and deliver a pollution-free environment by 2050. Advances in transport, agriculture systems and ecosystems and biodiversity are all required, as well as efforts to further develop a circular economy that ensures products can be reused and recycled. From 2021 to 2027, 35 percent of the EU's research funding will be dedicated to developing climate-friendly technologies One third of the  $\in$ 1.8 trillion investments from





the NextGenerationEU Recovery Plan, and the EU's seven-year budget will finance the European Green Deal. (<u>https://euinasean.eu/eu-green-deal/</u>)

Also, as a response to the current not only economical but also global political situation, as well as the global energy market disruption caused by Russia's invasion of Ukraine, the European Commission is implementing its REPowerEU Plan.

Launched in May 2022, REPowerEU is helping the EU

- save energy
- produce clean energy
- diversify its energy supplies

When Russia invaded Ukraine, it became even clearer that the EU needed alternative ways to ensure its energy supply. So, renewable energy can be an answer not only to the current and urgent climate change related issues, but it also be the key to greater independence of the EU in economic and resource terms.

Switching to the renewable sources of energy leads to many potential benefits, like reducing in greenhouse gas emissions and in dependency on fossil fuel markets, like gas and oil. It also leads to the stimulation of the employment in the EU, since the green jobs sector is now on growth and needs more people to be involved, providing working places as well as competitive salaries. (https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Renewable energy statistics)

According to the statistics, provided by the Eurostat, the share of renewable energy more than doubled between 2004 and 2021. The EU reached a 21.8 % share of its gross final energy consumption from renewable sources in 2021, around 0.3 percentage points lower than in 2020. The lifting of the restrictions linked to the COVID-19 pandemic probably played a role for this decrease. With more than half of energy from renewable sources in its gross final consumption of energy, Sweden (62.6 %) had by far the highest share among the EU Member States in 2021, ahead of Finland (43.1 %) and Latvia (42.1 %).

#### The top renewable energy producing countries are:

- Iceland 86.87%
   Norway 71.56%
   Sweden 50.92%
   Brazil 46.22%
   New Zealand 40.22%
   Denmark 39.25%
   Austria 37.48%
- 8. Switzerland 36.72%
- 9. Finland 34.61%
- 10. Colombia 33.02%





At the opposite end of the scale, the lowest proportions of renewables were registered in Luxembourg (11.7 %), followed by Malta (12.2 %) and the Netherlands (12.3 %).

Statistics also show that wind and water provide most renewable electricity; solar is the fastest-growing energy source. The growth in electricity generated from renewable energy sources during the period 2011 to 2021 largely reflects an expansion in two renewable energy sources across the EU, namely wind power and solar power. In 2021, renewable energy sources made up 37.5 % of gross electricity consumption in the EU, very similar to the previous year (37.4 % in 2020).

Wind and hydro power accounted for more than two-thirds of the total electricity generated from renewable sources (37.5 and 32.1 %, respectively). The remaining one-third of electricity generated was from solar power (15.1 %), solid biofuels (7.4 %) and other renewable sources (7.9 %). Solar power is the fastest-growing source: in 2008, it accounted for 1 %. This means that the growth in electricity from solar power has been dramatic, rising from just 7.4 TWh in 2008 to 163.8 TWh in 2021.

Wisevoter also prepared interactive data and statistics, showing by country, not only in Europe, but across the globe, the most recent statistic regarding the renewable energy generation. With the tables and graphics they make it very easy to compare from country to country, how is the situation with the renewable energy sources going. An interactive world map is also available on the website, where just by clicking on different countries, users immediately receive data.

According to the article, also available on the website and providing more explanation regarding the data showed on the map above, some countries have made progress in generating renewable energy. Iceland leads the way with an impressive 86.87% of its energy generated from renewable sources. Norway follows closely at 71.56%, while Sweden stands at 50.92%.

These statistics illustrate the global transition to renewable energy sources. Many countries have recognized the importance of reducing carbon dioxide emissions and mitigating the effects of climate change by switching to clean energy. Technological advances, favorable government policies and growing public awareness have contributed to the growth of renewable energy use worldwide. The share of renewable energy production is expected to continue to increase in the coming years as countries continue to invest in renewable energy infrastructure and explore innovative solutions. (https://wisevoter.com/country-rankings/renewable-energy-by-country/#saudi-arabia)





#### Overview of various renewable energy types

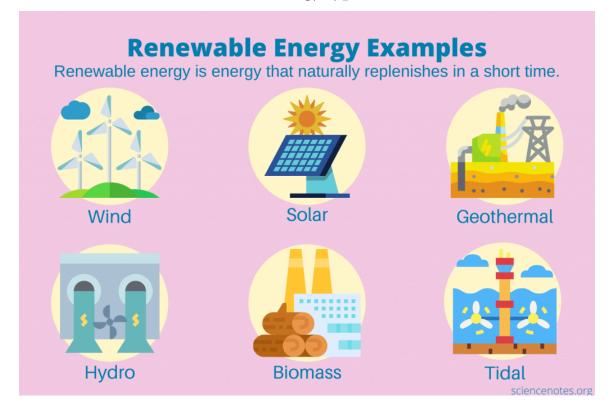


Image: <u>https://sciencenotes.org/renewable-energy-examples/</u>

There are plenty of sources of renewable energy, which vary from region to region. Some sources are available around the whole globe; some are more specific and based on the natural conditions of the region. In this Module, we will provide an overview of the most popular sources of renewable energy that are already actively used.

The most popular renewable energy sources currently are:

- Solar energy
- Wind energy
- Hydro energy
- Tidal energy
- Geothermal energy
- Biomass energy

We would love to provide a short overview of each energy source type. To do this, we turn to the article prepared by the United Nations. (https://www.un.org/en/climatechange/what-is-renewable-energy)

#### • Solar energy

Solar energy is the most abundant of all energy resources and can even be harnessed in cloudy weather. The rate at which solar energy is intercepted by the Earth is about 10,000 times greater than the rate at which humankind consumes energy.





Solar technologies can deliver heat, cooling, natural lighting, electricity, and fuels for a host of applications. Solar technologies convert sunlight into electrical energy either through photovoltaic panels or through mirrors that concentrate solar radiation.

Although not all countries are equally endowed with solar energy, a significant contribution to the energy mix from direct solar energy is possible for every country. The cost of manufacturing solar panels has plummeted dramatically in the last decade, making them not only affordable but often the cheapest form of electricity. Solar panels have a lifespan of roughly 30 years, and come in variety of shades depending on the type of material used in manufacturing.

#### • Wind energy

Wind energy harnesses the kinetic energy of moving air by using large wind turbines located on land (onshore) or in sea- or freshwater (offshore). Wind energy has been used for millennia, but onshore and offshore wind energy technologies have evolved over the last few years to maximize the electricity produced - with taller turbines and larger rotor diameters.

Though average wind speeds vary considerably by location, the world's technical potential for wind energy exceeds global electricity production, and ample potential exists in most regions of the world to enable significant wind energy deployment.

Many parts of the world have strong wind speeds, but the best locations for generating wind power are sometimes remote ones. Offshore wind power offers tremendous potential.

#### • Geothermal energy

Geothermal energy utilizes the accessible thermal energy from the Earth's interior. Heat is extracted from geothermal reservoirs using wells or other means.

Reservoirs that are naturally sufficiently hot and permeable are called hydrothermal reservoirs, whereas reservoirs that are sufficiently hot but that are improved with hydraulic stimulation are called enhanced geothermal systems.

Once at the surface, fluids of various temperatures can be used to generate electricity. The technology for electricity generation from hydrothermal reservoirs is mature and reliable, and has been operating for more than 100 years.

#### • Hydropower

Hydropower harnesses the energy of water moving from higher to lower elevations. It can be generated from reservoirs and rivers. Reservoir hydropower plants rely on stored water in a reservoir, while run-of-river hydropower plants harness energy from the available flow of the river.

Hydropower reservoirs often have multiple uses - providing drinking water, water for irrigation, flood and drought control, navigation services, as well as energy supply.





Hydropower currently is the largest source of renewable energy in the electricity sector. It relies on generally stable rainfall patterns, and can be negatively impacted by climate-induced droughts or changes to ecosystems which impact rainfall patterns.

The infrastructure needed to create hydropower can also impact on ecosystems in adverse ways. For this reason, many consider small-scale hydro a more environmentally-friendly option, and especially suitable for communities in remote locations.

#### • Ocean (Tidal) energy

Ocean energy derives from technologies that use the kinetic and thermal energy of seawater - waves or currents for instance - to produce electricity or heat.

Tidal energy is a form of power produced by the natural rise and fall of tides caused by the gravitational interaction between Earth, the sun, and the moon. Tidal currents with sufficient energy for harvesting occur when water passes through a constriction, causing the water to move faster. Using specially engineered generators in suitable locations, tidal energy can be converted into useful forms of power, including electricity. Other forms of energy can also be generated from the ocean, including waves, persistent ocean currents, differences and the in temperature and salinity in seawater. (https://www.pnnl.gov/explainer-articles/tidal-

energy#:~:text=What%20is%20tidal%20energy%3F,the%20water%20to%20move%20fast
er.)

Ocean energy systems are still at an early stage of development, with a number of prototype wave and tidal current devices being explored. The theoretical potential for ocean energy easily exceeds present human energy requirements.

#### • Bioenergy

Bioenergy is produced from a variety of organic materials, called biomass, such as wood, charcoal, dung and other manures for heat and power production, and agricultural crops for liquid biofuels. Most biomass is used in rural areas for cooking, lighting and space heating, generally by poorer populations in developing countries.

Modern biomass systems include dedicated crops or trees, residues from agriculture and forestry, and various organic waste streams.

Energy created by burning biomass creates greenhouse gas emissions, but at lower levels than burning fossil fuels like coal, oil or gas. However, bioenergy should only be used in limited applications, given potential negative environmental impacts related to large-scale increases in forest and bioenergy plantations, and resulting deforestation and land-use change.

For more information on renewable sources of energy, please check out the following websites:

- International Renewable Energy Agency | <u>https://www.irena.org/</u>
- International Energy Agency | <u>https://www.iea.org/energy-system/renewables</u>





- Intergovernmental Panel on Climate Change | <u>https://www.ipcc.ch/report/renewable-energy-sources-and-climate-change-mitigation/</u>
- UN Environment Programme | <u>https://www.unep.org/interactive/six-sector-solution-</u> <u>climate-change/</u>
- Sustainable Energy for All | <u>https://www.seforall.org/goal-7-targets/renewable-energy</u>

United Nations | What is renewable energy? [website] <u>https://www.un.org/en/climatechange/what-is-renewable-energy</u>, (accessed 08.06.2023).

#### Threads and concerns

Now that we have become acquainted with the terms, statistics, and principles of operation of various types of renewable energy, the question arises: Why still haven't we switched to renewable energy yet? It's green, safe, cheap, and provides jobs, sounds like we found a solution to the climate change thread with numerous economic and social benefits alongside.

In the article with the results of the research prepared by the Siemens it is statement, that however, simply adding renewable energy to the grid won't solve the climate crisis on its own. There is a fundamental issue which needs to be addressed here – and it concerns the grid itself. Much needs to be done to make the grid ready for the new energy future. The fact is that the current infrastructure is simply not equipped to handle a substantial rise in renewables.

On top of the need to enlarge the grid, the fluctuating nature of renewables requires a mix of new technologies to balance supply and demand. And according to IRENA, the shift from the regular grid to a renewables grid will demand at least a threefold increase in energy storage capacity by 2030. The infrastructure is simply not being updated at the rate of progress required. There's an urgent need for more investment – and for a clear plan of action.

Updating and expanding the grid is no simple challenge. Indeed, this is a three-part challenge: as well as being sustainable, the grid needs to be reliable and affordable (the 'energy trilemma').





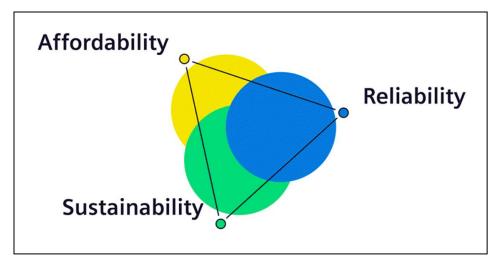


image "Energy trilemma" https://www.siemens-energy.com/global/en/priorities/decarbonization.html

And not only that. While the field of the renewable energy is rapidly developing and constantly growing, there are some challenges to face and to find a solution for.

In the article prepared by the REGEN power, the following points are mentioned: <u>https://regenpower.com/what-are-the-problems-faced-by-renewable-energy/</u>

- The high initial cost of installation. One of the stumbling blocks on the way to its development is the high initial cost of installation. Of all the energy sources, solar as well as wind is the cheapest ones. However, there is a huge difference in the upfront installation cost of a solar power system and a gas-fired plant.
- 2) Lack of infrastructure (that was already explained earlier in this Module).
- 3) Power Storage. Most importantly, the lack of power storage at an affordable cost is another drawback. Renewable energy sources generate most of their energy at certain times of the day. Its electricity generation does not match with the peak demand hours. The intermittency of sunshine and wind cannot provide an on-demand power source 24 hours a week. Solar energy and wind are unpredictable. There is volatility in generation and volatility in loads. A battery storage system helps to store the surplus energy for later use, but its high cost stands in its way of being wide installation. Battery prices have to come down to make storing of solar energy more cost-effective.
- 4) Non-renewable energy monopoly. The Loin share of the current energy market is under non-renewable energy sources. Certainly, this acts as another obstacle. Solar, wind, and other renewable sources of energy have to rival the wellestablished fossil fuel industry. Even though the government is providing rebates

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and other support for solar energy, the fossil fuel industry has massive support from the government.

- 5) Lack of policies, subsidies, etc. The lack of policies, subsidies, incentives, and regulations that favors renewable energy technologies hinders its wide acceptance. To attract investors, the renewable energy market needs clear policies and legal procedures. In other words, the government has to introduce and implement support policies to strengthen the renewable energy market.
- 6) Lack of knowledge and awareness. Lack of knowledge and awareness of renewable energy technology makes people reluctant to use it. Fossil fuel plants are usually in populated areas. It is a source of employment for the local population as it needs a lot of people to run. The huge property tax from fossil fuel plants is going to support the local community.

However, we shouldn't treat them as a sign to give up, but as a chance to make another breakthrough in the development of technology. It also gives a lot of space to the creativity and innovative ideas of Youth that will join the industry.

But even if you are not willing to work directly in the field of renewable energy doesn't mean Youth workers can't contribute to a more sustainable future. If a lack of knowledge is an obstacle in the way of switching to renewable energy, then we have an answer – raising awareness. Use your network to educate and inspire your community, use the information and explanation from this Module to gain more knowledge yourself, prepare a solid base for further self-research, and also share with others. Working with us you have an excellent opportunity to change the situation through education. The next part of the Module connects not only with the universal need for a better ecological situation that we all share but also with a very personal topic that is relevant for Youth at a certain point of their life – employment, and career. Can we create a better future for the planet, while chasing our ambitions and trying to find our path in life? This is the answer.

#### Job opportunities in the renewable energy sector

In the article "Green jobs: How will climate change impact employment trends?" Zurich Insurance Group asks its readers a question: Will combatting climate change create new sustainable career opportunities or have a detrimental impact on the global jobs market? We can't deny the fact the world is changing in the face of challenges such as climate change. It affects not only nature and biodiversity but every aspect of life, including employment opportunities. We are facing new challenges and they demand new





solutions, such as new jobs, new fields, and markets. What does it mean for Youth? It means, that more specialists in the renewable energy field are needed.

What are green jobs?

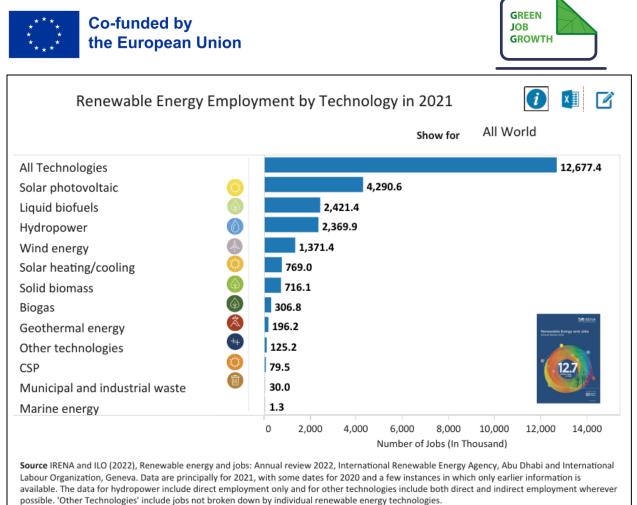
Before you rush out and apply for a new green job, it's worth understanding what, exactly, makes a job "green." There are various definitions, but the ILO's (International Labour Organization (ILO)) description is one of the most cited, which also highlights the variety of careers that are making a difference:

"Green jobs reduce the consumption of energy and raw materials, limit greenhouse gas emissions, minimize waste and pollution, protect and restore ecosystems and enable enterprises and communities to adapt to climate change. In addition, green jobs have to be decent [i.e., fair and dignified]." (<u>https://www.zurich.com/en/media/magazine/2021/5-green-jobs-of-the-future</u>)

These three fossil fuel sectors alone – oil, gas and coal industries - employ more than 18 million people globally with the UN's International Labour Organization (ILO) predicting that the transition to a clean energy industry will lead to the loss of 6 million jobs worldwide by 2030. World is changing right now and if we want to succeed and build a desirable future, we need to learn to analyze the current market situation and see, in which field our talents and vision are in demand. The ILO estimates the greening of the global economy will create 24 million additional jobs over the same time period.

"The transition to a net-zero future will create new industries, new jobs and revitalize local economies," says Linda Freiner, Group Head of Sustainability at Zurich Insurance Group. "Approached in the right way, it can forge a path to a more resilient future encompassing new growth opportunities for businesses, which leads to new jobs being created. But what excites me, is that these new careers will be truly fulfilling as they will help to protect both our planet and our futures."

We highly the full article recommend read you to https://www.zurich.com/en/media/magazine/2021/5-green-jobs-of-the-future to learn about 5 green jobs of the future, from Eco-builder to urban farmer and sustainability expert. Professions that we couldn't imagine a decade ago appear yearly, which gives the Youth unlimited opportunities to find their path in the sustainable future and build a career, that will not only be financially successful, but also fulfillingly meaningful.



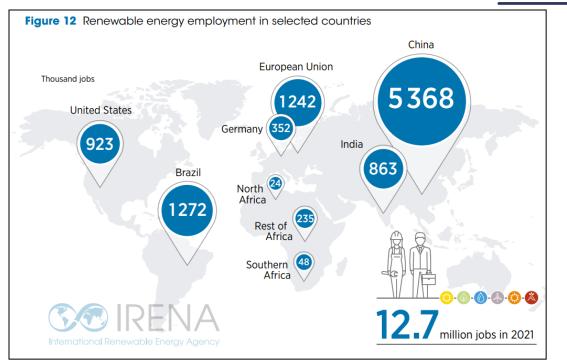
possible. Other recimologies mediae jobs not broken down by manual renewable energy technologies.

Image: <u>https://www.irena.org/Data/View-data-by-topic/Benefits/Renewable-Energy-Employment-by-Country</u>

On the table above you can see the employment statistic in the renewable energy sector from the 2021 provided by IRENA. The International Renewable Energy Agency (IRENA) is a lead global intergovernmental agency for energy transformation that serves as the principal platform for international cooperation, supports countries in their energy transitions, and provides state of the art data and analyses on technology, innovation, policy, finance and investment.







Source: IRENA jobs database, annual report 2022 by IRENA.

On September 2022 International Labor Organization released an article "Renewable energy jobs hit 12.7 million globally". <u>https://www.ilo.org/global/about-the-ilo/newsroom/news/WCMS 856515/lang--en/index.htm</u>

In the article the following information was provided:

"Worldwide employment in renewable energy reached 12.7 million last year, a jump of 700,000 new jobs in one year, despite the lingering effects of COVID-19 and the growing energy crisis, according to a new report. With rising concerns about climate change, <u>COVID-19 recovery</u> and supply chain disruption, national interest is growing in localizing supply chains and creating jobs at home. The report describes how strong domestic markets are key to anchoring a drive toward clean energy industrialization. The report shows that an increasing number of countries are creating jobs in renewables. Almost two-thirds of all these jobs are in Asia. China alone accounts for 42 per cent of the global total, followed by the EU and Brazil with ten per cent each, and the USA and India with seven per cent each".

For more detailed information we recommend you to read the full article available on the link. Also on the following link an annual report for 2022 by IRENA is available. It is called "Renewable Energy and Jobs" and provides a detailed research and data on the topic. <u>https://www.ilo.org/wcmsp5/groups/public/---dgreports/---</u>dcomm/documents/publication/wcms 856649.pdf

The report highlights some notable regional and national developments. These include Southeast Asian countries becoming major solar photovoltaic (PV) manufacturing hubs





and biofuel producers. China is the pre-eminent manufacturer and installer of solar PV panels and is creating a growing number of jobs in offshore wind. India added more than 10 Gigawatts of solar PV, generating many installation jobs, but remains heavily dependent on imported panels.

Europe now accounts for about 40 per cent of the world's wind manufacturing output and is the most important exporter of wind power equipment; it is trying to reconstitute its solar PV manufacturing industry. Africa's role is still limited, but the report points out that there are growing job opportunities in decentralized renewables, especially in support of local commerce, agriculture, and other economic activities.

In the Americas, Mexico is the leading supplier of wind turbine blades. Brazil remains the leading employer in biofuels but is also adding many jobs in wind and solar PV installations. The USA is beginning to build a domestic industrial base for the budding offshore wind sector.

The report highlights that the expansion of renewable energy needs to be supported with holistic policy packages, including training for workers to ensure jobs are decent, high quality, well paid and diverse in pursuit of a just transition.

What this information can mean for us and why it makes sense to take a look at the statistic from several past years? Comparing the statistic and reports we can see, that the amount of jobs in the renewable energy field is constantly growing. Numbers are showing that countries around the globe are highly motivated to develop and expand the renewable energy production sector. And it means that specialists in this field are in demand and they will be increasingly in demand along with the growth of the industry. This information is extremely valuable and motivating for Youth, that is currently on the stage of life to decide in which direction to grow, in which field to continue education and build a career. Out reality is very much influenced by the modern technologies and current challenges, that we are as a society and humanity are facing. Some jobs will slowly (or not that slowly) die out in a few years, because of the new technologies. But there are also a lot of opportunities on how to combine personal career path with contributing to the most urgent ecological and social problems.

We would love to recommend you the following article from the European Union: "New skills and jobs for Europe's green future". <u>https://climate-pact.europa.eu/news/new-skills-and-jobs-europes-green-future-2023-04-28 en</u>. In this article Youth workers can learn more about the skills and competencies we all need to learn, to prepare ourselves for the world where the green job market is blooming. It is not about a specific field of study or work, but more about common competencies that are in demand today. Knowing this, Youth workers can use their networks and activities, to share, educate, and raise awareness of youth on the following competencies, making a contribution to making our communities greener and helping Youth find their way into the green job market.





#### Conclusion

The aim of this Module is to introduce youth workers to renewable energy sources and their advantages, preparing them to guide young people towards green energy jobs. We need to learn how to see opportunities in challenges, even as big and frustrating, as climate change. The world we are living in now is changing and we need this change. Moreover, we need to contribute to this change with our vision enthusiasm, knowledge, and engagement. What is important, it will benefit not only the ecosystem we are all living in, but our societies and personal lives as well. We can build a better future, while also building our careers, in fact, in this case, it doubles the benefit for everyone. Youth workers should use their network and various opportunities to connect with the community to raise awareness and educate. And specifically educate Youth regarding both: challenges and opportunities. Renewable energy is becoming a bigger and bigger part of our lives and this is the time to learn more about it, and understand its advantages as well as questions that are waiting to be solved. We all can contribute to the greener future powered by renewable energy starting from educating ourselves and our communities.





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