GREEN ECONOMY AND GREEN ENTREPRENEURSHIP

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GREEN ECONOMY

The United Nations Environment Program (UNEP) defines a green economy as “An economy that results in improved human well-being and social equity, while significantly reducing environmental and environmental risks. ecological scarcity".

The green economy employs sustainable technology in the production system. In this way, the production stages follow fair, economically viable, and environmentally appropriate processes.

The objective of the green economy in companies is to combat the loss of biodiversity, through models that seek to increase energy efficiency, the generation of jobs, and the maximum use and reuse of natural goods and raw materials, commonly reducing the generation of waste.

The concept emerged in the context of RIO-92 and was elaborated on and disseminated around the world in a UNEP report (2011). The green economy must stimulate the generation of jobs and the production of income for the entire population. However, at the same time measures must be taken to reduce greenhouse gases, increase energy efficiency (using alternative and clean energy sources), and sustainable use of natural resources. The green economy is also called ecodevelopment.

The green economy is a model of economic development that results in improved social welfare and equity, an economy based on sustainable development and a knowledge of the green economy.

A green economy means a low-emission economy through the efficient and sustainable use of non-renewable resources and ensuring social inclusion by increasing energy efficiency and resource efficiency to prevent the loss of biodiversity and ecosystem services.

Karl Burkart defines a green economy as being based on six main branches:

1. Renewable energy (solar, wind, etc.)
2. "Green" constructions (i.e., LEED constructions - Leadership in Energy and Environmental Design);
3. Alternative fuels (electric, hybrid or alternative fuels);
4. Water management (water purification, rainwater collection systems, etc.);
5. Waste management (recycling, storage, etc.);
6. Territorial management (including organic agriculture, habitat conservation, afforestation at urban level-parks, reforestation and land stabilization).

The 7th category is called "green markets" and includes markets such as green banking and financial investment services, banking and green investment services; carbon trading, etc.

The green economy is based on everything that helps to preserve the environment; we are talking about minimizing limited resources (water, forests, minerals and plant raw materials), small amounts of waste, regeneration of waste and scrap, resulting in zero impact on the environment in air, water and land and thus preventing "crises" that there have been economies based on fossil fuels and the misuse of natural resources, "crises" such as climate change, erosion of biodiversity, food supply and growing problems with access to fresh water.

This type of economy suggests a sad world and pauperism dominated by shortages, it involves a process of major overhaul and investment for companies and civil society, it involves advanced technologies. In fact, it does not foresee major changes in the fundamental basis of the current degenerative economic paradigm (financial capitalism), requires high investment (which is not accessible without incentives) and, above all, this economy does not understand the meaning of " economic sustainability".

The 5 Principles of Green Economy Exploring what a green and fair economy looks like in principle - and in practice

1. The Wellbeing Principle

A green economy enables all people to create and enjoy prosperity.

- The green economy is people-centred. Its purpose is to create genuine, shared prosperity.
- It focuses on growing wealth that will support wellbeing. This wealth is not merely financial, but includes the full range of human, social, physical and natural capitals.
- It prioritizes investment and access to the sustainable natural systems, infrastructure, knowledge and education needed for all people to prosper.
- It offers opportunities for green and decent livelihoods, enterprises and jobs.
- It is built on collective action for public goods, yet is based on individual choices.

2. The Justice Principle

The green economy promotes equity within and between generations.

- The green economy is inclusive and non-discriminatory. It shares decision-making, benefits and costs fairly; avoids elite capture; and especially supports women's empowerment.

- It promotes the equitable distribution of opportunity and outcome, reducing disparities between people, while also giving sufficient space for wildlife and wilderness.
- It takes a long-term perspective on the economy, creating wealth and resilience that serve the interests of future citizens, while also acting urgently to tackle today's multidimensional poverty and injustice.
- It is based on solidarity and social justice, strengthening trust and social ties, and supporting human rights, the rights of workers, indigenous peoples and minorities, and the right to sustainable development.
- It promotes empowerment of MSMEs, social enterprises, and sustainable livelihoods.
- It seeks a fast and fair transition and covers its costs – leaving no-one behind, enabling vulnerable groups to be agents of transition, and innovating in social protection and reskilling.

3. The Planetary Boundaries Principle

The green economy safeguards, restores and invests in nature.

- An inclusive green economy recognizes and nurtures nature's diverse values – functional values of providing goods and services that underpin the economy, nature's cultural values that underpin societies, and nature's ecological values that underpin all of life itself.
- It acknowledges the limited substitutability of natural capital with other capitals, employing the precautionary principle to avoid loss of critical natural capital and breaching ecological limits.
- It invests in protecting, growing and restoring biodiversity, soil, water, air, and natural systems.
- It is innovative in managing natural systems, informed by their properties such as circularity, and aligning with local community livelihoods based on biodiversity and natural systems.

4. The Efficiency and Sufficiency Principle

The green economy is geared to support sustainable consumption and production.

- An inclusive green economy is low-carbon, resource-conserving, diverse and circular. It embraces new models of economic development that address the challenge of creating prosperity within planetary boundaries.

- It recognises there must be a significant global shift to limit consumption of natural resources to physically sustainable levels if we are to remain within planetary boundaries.
- It recognizes a 'social floor' of basic goods and services consumption that is essential to meet people's wellbeing and dignity, as well as unacceptable 'peaks' of consumption.
- It aligns prices, subsidies and incentives with true costs to society, through mechanisms where the 'polluter pays' and/or where benefits accrue to those who deliver inclusive green outcomes.

5. The Good Governance Principle

The green economy is guided by integrated, accountable and resilient institutions.

- An inclusive green economy is evidence-based – its norms and institutions are interdisciplinary, deploying both sound science and economics along with local knowledge for adaptive strategy. It is supported by institutions that are integrated, collaborative and coherent – horizontally across sectors and vertically across governance levels – and with adequate capacity to meet their respective roles in effective, efficient and accountable ways.
- It requires public participation, prior informed consent, transparency, social dialogue, democratic accountability, and freedom from vested interests in all institutions – public, private and civil society – so that enlightened leadership is complemented by societal demand.
- It promotes devolved decision-making for local economies and management of natural systems while maintaining strong common, centralized standards, procedures, and compliance systems.
- It builds a financial system with the purpose of delivering wellbeing and sustainability, set up in ways that safely serve the interests of society.

The green economy is a universal and transformative change to the global status quo. It will require a fundamental shift in government priorities. Realising this change is not easy, but it is necessary if we are ever to achieve the Sustainable Development Goals.

The rapidly increasing population of the world since the 2000s has increased the pressure on production. Increased pressure on production and increased production have led to a faster consumption trend. As a natural consequence of these two trends, harmful consequences also began to emerge on the environment and ecological order. The green economy approach, which

emerged towards the protection of the environment and ecological order, is becoming increasingly common.

An inclusive green economy is one that improves human well-being and builds social equity while reducing environmental risks and scarcities. An inclusive green economy is an alternative to today's dominant economic model, which exacerbates inequalities, encourages waste, triggers resource scarcities, and generates widespread threats to the environment and human health.

Over the past decade, the concept of the green economy has emerged as a strategic priority for many governments. By transforming their economies into drivers of sustainability, these countries will be primed to take on the major challenges of the 21st century – from urbanization and resource scarcity to climate change and economic volatility.

United Nations Environment launched the Green Economy Initiative (GEI) in 2008, which consisted of global research and country-level assistance encouraging policymakers to support environmental investments within the context of sustainable development. Thanks to this initiative and the work of other agencies, "green economy in the context of sustainable development and poverty eradication" was placed on the 2012 Rio+20 agenda and was acknowledged as a tool for achieving sustainable development.

UN Environment has developed a working definition of a green economy as one that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities.

An Inclusive Green Economy (IGE) has evolved from earlier work on Green Economy. In its simplest expression, such an economy is low carbon, efficient and clean in production, but also inclusive in consumption and outcomes, based on sharing, circularity, collaboration, solidarity, resilience, opportunity, and interdependence. It is focused on expanding options and choices for national economies, using targeted and appropriate fiscal and social protection policies, and backed up by strong institutions that are specifically geared to safeguarding social and ecological floors. And it recognizes that there are many and diverse pathways to environmental sustainability.

An Inclusive Green Economy is an alternative to today's dominant economic model, which generates widespread environmental and health risks, encourages wasteful consumption and production, drives ecological and resource scarcities and results in inequality. It is an opportunity

to advance both sustainability and social equity as functions of a stable and prosperous financial system within the contours of a finite and fragile planet. It is a pathway towards achieving the 2030 Agenda for Sustainable Development, eradicating poverty while safeguarding the ecological thresholds, which underpin human health, well-being, and development.

Green economy in Slovenia

A shift towards the green economy, which has a smaller impact on the environment, is no longer just the fantasy of environmentalists, but a necessary fact. In ensuring competitiveness and complying with environmental policies, companies are required to reduce costs and work towards sustainable development; on the other hand, this provides them with new, innovative business opportunities.

Young people have an important role to play in the transition to a circular economy, both acting as a representative of consumers with different and higher expectations than the generations before them regarding sustainability, and as the face of innovative entrepreneurs aware of the limit of the current economic model and ready to rethink production and consumption habits as they enter the professional world.

In 2017, Slovenia was named the most sustainable country on Earth by National Geographic. While visiting Ljubljana and Lake Bled, I witnessed some visible signs of sustainability: eco-friendly zones, recycling programs, and restricted swimming areas. To go beyond what meets the eye, I decided to do some research on my own to learn more about how Slovenia got its title.

Countries in the running for the top prize of the "World's Most Sustainable Country" had to satisfy a series of criteria. Out of the 100 sustainability indicators, Slovenia stole the show by achieving 96/100. One of these indicators included waste separation, of which the capital, Ljubljana, collected 63% of separated waste while aiming for separation over incineration. The city centre also demonstrated its prioritization of pedestrians and cyclists over cars and traffic which once covered the whole city. Only economically accessible city buses, which run on natural gas, are allowed to access the city centre. Additionally, about 74% of houses in Ljubljana are heated by natural gas, reducing the consumption of fossil fuel. Other signs of sustainability could be seen in the green spaces, which are promoted throughout the city. Many countries, companies and investors have already identified the measurable financial and environmental benefits that a green economy can offer, along with business advantages and improvements to their knowledge, experience and reputation. Slovenia is one of those countries. Legislative requirements, obligations to constantly improve environmental and energy management, and the directive on

the disclosure of non-financial information, which is mandatory for companies with more than 500 employees, compel companies in all sectors (construction, mobility, energy, agriculture, tourism, finance, insurance business, etc.) to move towards greener, more circular and more sustainable operations. This applies to what companies do and the services and products they provide. The Eco Fund and SID Bank also promote the energy efficiency of Slovenian companies with financial mechanisms.

Slovenia presents an excellent green economy potential, as classified as a country with an outstanding green competitiveness level and countries like Estonia, Austria, Lithuania, the Netherlands, and Spain. In the circular economy concept, besides protecting the environment, green policy measures provide essential economic benefits through resource security, economic stability, and the creation of green jobs. Slovenia can become one of Europe's best environmental and circular economy performers.

Also, the Slovenian Smart Specialization Strategy 2014–2020 allocates "approximately 80% of the ERDF funds on RDI, competitiveness, ICT and low-carbon society and 70% of the ESF funds on employment and lifelong learning, as well as 20% of the funds to climate change adaptation, better environmental status and biodiversity, the establishment of an infrastructure for sustainable mobility and social inclusion and institutional capacity". Concerning the willingness to pay for green energy, analyses found out that suggest young and well-educated consumers and high-income individuals have a higher propensity to pay more for green energy services considered a target for awareness-raising campaigns by green marketers.

Eco-innovation at the heart of European policies[1]

Slovenia experienced a significant decrease in the overall Eco-innovation index for 2019 compared to 2017 from a score of 115 in 2017 to 94 in 2019, placing the country below the EU average. In 2019, they rank 15th in the EU28. Slovenia performed close to the EU average in four components in the Eco-innovation Index, whereas the country performed significantly below the EU average in resource efficiency outcomes. Material productivity, water productivity, energy productivity and GHG emissions intensity remain the main challenges for the country on its path to a climate neutral and circular society.

Slovenia is a small and open economy, largely dependent on the international economic environment. There are numerous opportunities but also challenges in its transition to a circular

[1] https://ec.europa.eu/environment/ecoap/slovenia_en

economy and in eco-innovation development. A clear collective political action towards more green and circular economy policies has grown, but integrated policies and a strong political leadership focusing on eco-innovations is still lacking. The trends of 2018- 2019 continue with a business sector that is the key generator of R&D. The leading areas for circular economy and eco-innovation is the manufacturing industry with automotive companies and electric mobility, energy efficiency in buildings and sustainable construction, efficient electric equipment, smart metering technologies and pharmacy. Slovenia also focuses on energy efficiency in the sectors of agriculture and food, and green tourism as the model for Slovenian tourism. Sustainable mobility and forest-based value chains have been recognised as priority areas for transition to a circular economy. The main drivers to circular economy and eco-innovation in Slovenian companies remain the competitive pressure and the European common market. Digitalisation may act as one of the catalysts for the development of new circular business models. Important barriers remain with complex administrative or legal procedures, lack of expertise to implement circular activities, as well as lack of human resources on all levels and difficulties in assessing finance.

Green economy and growth in Turkey

The financial sector also plays the central role in fostering greener economy. Climate change presents opportunities for Turkey's financial sector as shifting to a low-carbon and climate resilient economy requires a significant amount of mobilized funding across sectors. As for most countries, much of the finance for greener growth and climate action in Turkey will need to come from domestic sources and, with the right domestic enabling conditions, international private investment. The post-COVID 19 economic recovery phase offers Turkey an opportunity to position its economy on a greener growth path.

EBRD: As of 2020, the EBRD had invested €11,959 million in 302 projects in Turkey and this portfolio is growing. About half of these investments support the "green" economy and promote the sustainable use of energy and resources in the country. These investments have financed 3 GW of installed renewable capacity in wind, solar, and geothermal projects (about 7% of Turkey's total installed renewable capacity) and helped prevent approximately

11.3 million tons of CO2 equivalent. Other types of projects include lower-carbon and sustainable transport solutions, water efficiency, and material efficiency improvement across sectors aimed at reducing the country's resource intensity. The EBRD's Turkey Country Strategy 2019 and 2024 will continue focusing on accelerating the country's shift to the green economy and supporting regional energy connectivity.

GREEN ENTREPRENEURSHIP

Different writers and researchers have variously referred to the concept of "green entrepreneurship" such as environmental entrepreneurship, enviro-preneurship, ecological entrepreneurship and eco-capitalism. The individuals or group of people who serve as the agents that bring about the changes to the business arena have also been referred to as ecopreneur, enviro-preneurs and green entrepreneurs by researchers interested in the idea of entrepreneurship. In any of the different ways that the concept has been described, a common theme that resonates is the fact that environmental entrepreneurship connotes the idea of developing a business while at the same time demonstrating a concern for ecological and social needs of present and future generations.

As depicted in the following picture, social and/or environmental challenges can be tackled by entrepreneurial activities relying on systematic change/innovation. If both challenges are addressed in a single entrepreneurial activity, it is regarded as sustainable entrepreneurship. On the other hand, it is named as eco-entrepreneurship when only environmental issues are subject of entrepreneurship.

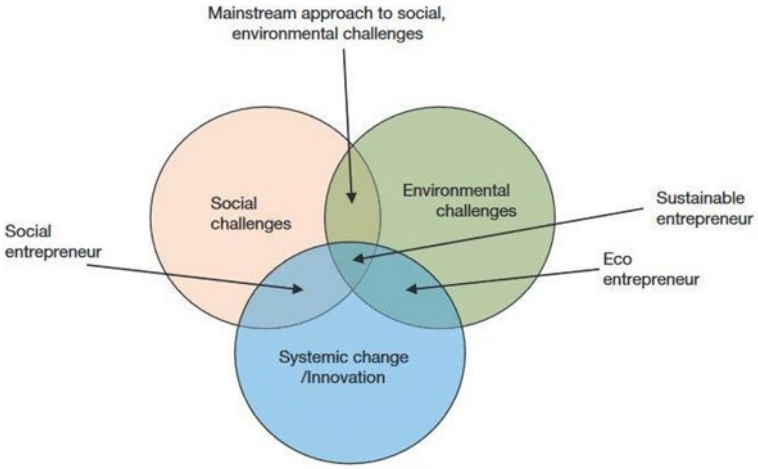


Figure 1. Interactions between social/environmental challenges and systemic change/Innovation.

What is a green business?

There is no single definition of a green business, but generally, it's a business whose core business model addresses an environmental or social issue – this is, it improves energy or resource efficiency, reduces greenhouse gas emissions, decreases waste or pollution, protects or restores ecosystems, promotes local culture, or supports communities.

A green business will typically do any or all of the following:

- Incorporate principles of sustainability into its business decisions and actively monitor them.
- Pay staff a fair wage for the work they do and ensure that they are able to maintain a good work-life balance. Distribute benefits equitably across the value chain.
- Maximize the social benefits of the business (i.e., by employing marginalized groups). Some businesses set up foundations to assist with this – but a sustainable business doesn't confine its social activities just to charitable donations – it looks for every opportunity to increase the social benefits of the business in its day-to-day operations.
- Supply environmentally-friendly and/or local products and services that replace demand for non-green or imported products and services.
- Help its community become more sustainable (e.g., by reducing energy use or water use, or reducing waste or pollution).
- Make efforts to reduce resource use (energy, water, materials), and replenish, enhance, or substitute an environmental resource that is used by the business (e.g., replanting trees, enhancing soil fertility, using renewable energy).
- Make an enduring commitment to environmental principles in its business operations. These will often be detailed in a publicly available and regularly updated Sustainability or Environmental Policy.

Green entrepreneurship in Portugal

After the completion of the EU Economic and Financial Assistance Program (PAEF), Portugal needed a further vision of the long-term development of the country. The momentum followed the launch of a new set of structural reforms, as well as the targeted investments in strategic areas such as knowledge, industrial policy, and the green economy.

The Government has been undertaking structural reforms in the areas of the environment, energy, spatial planning, transport, housing, science, innovation, agriculture, and tourism, going in line with the plans and actions reflected in the national strategies (key public policy instruments), among them being The National Research and Innovation Strategy for Smart Specialization (ENEI), The Industrial Development Strategy for Growth and Employment (EFICE), etc., as well as several sectoral plans aimed at and based on public-private partnership (PPP). Portugal takes an advantage of the opportunity to promote an integrated and comprehensive vision of the sectors with green growth potential.

The “red line” approach lies in nurturing the ability to link research, development, and innovation to production, products, services, and processes, and to proper funding mechanisms. The Green Growth Coalition (GGC), founded in 2014, combines the efforts of about 100 associations, representatives of the business, science, and financial sectors, public bodies, foundations, and NGOs. The Green Growth Commitment (GGC), published by the Ministry of Environment, Spatial Planning and Energy sets out 14 quantified goals for 2020 and 2030, reflecting on the paradoxical situation faced by Portugal (i.e., possessing talents, resources, and infrastructures with high potential, encountering however considerable structural problems) and the ways of overcoming it.

The strategic paper highlights the importance of using the existing economic opportunities and the chances to create green growth-related jobs (given Portugal has the talent, resources, and infrastructures required to win on a global scale in the short-term, and considering the growing demand for green goods and services). The goals of green growth are consistent with the main challenges faced by the society in Portugal, and therefore contribute to meeting them: growth, employment, lower dependency on imports, more intelligent taxation, etc.

Backed up by the government support and investment coming from the private sector, our country has witnessed the start-up revolution, an “entrepreneurial discovery trend”. Portugal’s Novo entrepreneurs applied their creativity, took a chance to start their business, and thereby contributed to the transition of the economy from its traditional manufacturing roots to the one based on innovation. As a result, several business incubators have been created (Start-up Lisboa), accelerator activity improved (Lisbon Challenge, acknowledged as one of the top five most active programs in Europe), start-ups like TechStars, Y Combinator, Seedcamp, etc., as well as Portugal mainland and Azores Ventures were launched.

Backed up by The Strategic Plan for Waste Management (for Portugal m. and the Azores in particular), recycling practices have increased and have become one of the Government priorities.

Green entrepreneurship in Malta

Malta has a high population density, which is why resource conflicts, such as water and raw material shortages, often arise on the island. The European Council has launched a facility and development plan to expand climate protection and digitization in Malta. Of the funding of around EUR 670 billion, around 57% will be invested in achieving climate protection goals.

Malta has set five milestones to establish job creation and strengthen the economy. This means that regional companies will also be heavily involved in the plan. Jobs will be created by creating a waste management system, renovating buildings to make them more energy efficient. In addition, public transport will be improved to make traffic more sustainable.

In addition, companies are increasingly turning to renewable energies, especially solar energy, as the hours of sunshine on Malta are ideal for this. For example, the University of Malta was the first company to use photovoltaic systems. This led to an annual CO2 reduction of 2500 tons and covered 16% of the electricity needs of the entire university.

Green entrepreneurship in Turkey

It is quite a common opinion that "green entrepreneurship covers quite a wide range of investment areas. The sectors of "energy" and "waste management" come up as the highest priority sectors, which also act as cross cutting sectors for many other sectors including the predefined priority areas namely food, housing and mobility.

The following sectors are determined as the present and potential sectors for green entrepreneurship in Turkey:

- Energy (renewable energy, clean coal technologies, energy efficiency).
- Waste Management (waste recovery, recycling and valorisation).
- Agriculture and Husbandry (efficient techniques, organic agriculture and husbandry waste valorisation, waste to energy and waste to product).
- Automotive (electrical cars, engine and battery technologies).
- Electrical Household Appliances (energy efficient and eco-designed appliances).

Most of the green entrepreneurship cases (or business ideas) developed in Turkey are in the sectors of waste management and valorisation, organic agriculture and energy. Meanwhile, in the service sector, environmental and energy consultancy is becoming an important sector, both in technical and legislative aspects. The eco-tourism sector, which has not come into significant existence so far, can be regarded as a potential opportunity for Turkey, being able to address all priority areas (housing, mobility, food) and service sectors. On the other hand, industrial symbiosis and climate change adaptation, which have the potential to cover and extend to many sectors and areas of services, products and technologies, are believed to hold extensive potential for green entrepreneurship.

In the century when the world's population exponentially increases, human resources are reversed and serious problems arise in access, production and use of most vital resources. Sustainable use of resources is critical for the future of humanity, as needs are endless but resources are limited and with increasing consumption pressure. Within the scope of sustainable use; sustainable technologies and green entrepreneurship can offer solutions that allow people to breathe more comfort through the ages.

The government and other organizations step up to support innovation in green projects and green entrepreneurship.

By investing in innovation, the public sector plays a key role in reducing the risk for private sector participation. This makes the path to commercial success faster and less costly for new market entrants. A coherent and pro-active national entrepreneurship policy would set the tone for dynamism throughout the sector. Furthermore, this would help lay the official foundation for entrepreneurship, while ideally easing the risk perception overhang in the securing of funding for the earliest stages of activity. Executing a well-crafted policy is often a lengthy and complicated political process. However, the benefits of achieving this would have a lasting effect across all entrepreneurial sectors, especially concerning green entrepreneurship.

Based on the current situation, possible initiatives for the improvement of green entrepreneurship in Turkey are showed below:

- Raising awareness on environmental problems and the significance of SCP (Sustainable Consumption and Production) and dematerialization at all levels of the community, including consumers, the business world and entrepreneurs.
- Development of stakeholder's capacity, communication and inclination regarding the environment and green entrepreneurship through dissemination events, technology development, success stories and collaborative actions.
- Development of an SCP Strategy and Action Plan as well as market policies for encouraging entrepreneurs and investors and enhancing the demand as well as incorporating sustainable lifestyles into the regional development policies.
- Improvement of financial opportunities through specific support programmes and mechanisms to stimulate existing investment opportunities towards green entrepreneurship.

Green enterprise ideas from Turkey

Green entrepreneurship projects from Turkey participating in the International Green Entrepreneurship Ideas Competition organized by the International Green Entrepreneurship Centre:

- Tarlamvar: An initiative to reduce inefficiencies in the supply chain of agricultural products by connecting the individual consumer with the farmer.
- Toplio: A mobile e-waste marketplace and reverse logistics platform that brings together licensed e-waste collection-separation and recycling facilities with people who generate e-waste at home or at work, and provides its stakeholders with the opportunity to earn, save and donate.
- Pulsec: Collecting idle electronic waste and converting it into functional, aesthetic or programmable products within the scope of corporate social responsibility and training curriculum.
- Bluedot: Electric car users can reach the charging unit, make reservations and payments; The idea of a marketplace where charging unit owners generate income through the sharing economy.
- Paksumatik: Detecting dangerous bacteria and harmful particles in water using artificial intelligence.
- Avus: An initiative idea that offers solutions to the problems of early opening and late closing of street lighting.
- Phototherma: Hybrid Solar Panel: Hybrid solar panel production that produces electricity from both the light and heat of the sun and can remove snow in snowy periods.
- OTTO: Development of vehicle cleaning technologies that save 100 percent water.
- Ecording; It is a social green enterprise that develops both sustainable and innovative environmental technologies against the global climate crisis and individual environmental awareness. Ecording apply afforestation activities by shooting seed balls with the EcoDrones they have developed.
- Plastic Move: It offers a patentable upcycling technology by replacing 20% of the petroleum used in production with bio-raw material produced from agricultural and food wastes.

Green entrepreneurship in Italy

Italy's efforts for a greener economy were halted at the moment in history when many other EU countries ramped up their efforts for sustainable policy changes. With the beginning of the new century came a general increase in awareness of the effects of industrialization. The Turin protocol of 2001 pledged a reduction of GHG emissions, investment in renewable energy sources, and strategies to improve air quality. Unfortunately, these efforts were interrupted by the recession of 2007. As one of the worst hit countries in the EU, this ushered in a period of political instability in Italy, with massive funding cuts due to the austerity program, which deprioritized environmental sustainability. The following years brought a post-recession stagnation.

The Green Economy Tracker describes Italy's post-recession stagnation: "After a decade of good progress on decarbonisation which saw a 27% fall in GHG emissions to 2014, the following five years saw only a 1.6% reduction, as green investment fell and incentives were slashed."[2]

As Italy's economy bounded back in the following years, green investments became increasingly prioritised, both by the government and by private entities.

The EU binding climate and energy legislation for 2030 requires Member States to adopt national energy and climate plans (NECPs) covering the period 2021 to 2030. In October 2020, the European Commission published an assessment for each NECP. Italy's final NECP was sent in December 2019.

A high proportion of Italians (63 %) expect national governments to tackle climate change.

Italy generates 11.4 % of the EU's total greenhouse gas (GHG) emissions and has reduced emissions at a faster pace than the EU average since 2005. Emissions decreased across all economic sectors in Italy over the 2005-2019 period, with the agricultural sector showing the lowest reductions.

The transport and 'other emissions' sectors, including buildings, account for almost half of Italy's total emissions. Energy industry emissions fell by 42 % between 2005 and 2019, leaving the sector in third place in terms of its share of total emissions. Under EU effort- sharing legislation, Italy reduced its emissions by 13 % by 2020 relative to 2005, and the country expects to reach the 2030 target of 33 %.

[2] https://greeneconomytracker.org/country/italy

Italy achieved an 18 % share of renewable energy sources (RES) in 2019. The country's 2030 target of a 30 % share is focused mainly on wind and solar power. Energy efficiency measures centre to a large extent on the building stock and transport sectors with support schemes for industry and households.

Green economy trends

1. Circular economy

In 2050, the world population is expected to exceed 9 billion people, according to the United Nations Department of Economic and Social Affairs. For this reason, it is important to change the current model of production and management of resources that promotes short-term consumption and the reduction of the useful life of products.

The future involves betting on other models such as the circular economy, which advocates using as many biodegradable materials as possible in the manufacture of consumer goods, so that they can return to nature without causing environmental damage.

2. Corporate culture

The business culture is linked to the entity's behaviour abroad and its social attitude; in addition, it is determined by governmental factors and ecological philosophy.

The objective is none other than that both the target and the workers identify with what is transmitted socially. A good example of this is Facebook, which has established a pay of 10,000 dollars for those employees who move to live near the corporate campus.

3. Responsible purchases

The green economy not only affects large companies, with high pollution margins, but also their suppliers, smaller companies that are required to have certain responsibilities related to the environment.

In this way the extraction, transport and handling of resources is more efficient, reducing the environmental impact of the activity.

4. Green infrastructure

The European Commission defines a green infrastructure as that strategically planned network of natural and semi-natural spaces and other environmental elements designed and managed to offer a wide range of ecosystem services. It includes green spaces (or blue in the case of aquatic

ecosystems) and other physical elements in terrestrial (natural, rural and urban) and marine areas.

The leitmotiv of green infrastructure is none other than to enhance nature's ability to provide multiple and valuable ecosystem goods and services, such as clean water or air. Another important aspect of green infrastructure is ecological restoration.

5. Sustainable agriculture

According to the Food and Agriculture Organization of the United Nations (FAO), a third of agricultural land is degraded, 75% of crop genetic diversity has been lost, and 22% of livestock breeds are at risk. In this scenario, committing to sustainable agriculture is becoming a priority for consumers in developed countries.

How can we make sustainable management of land, water and natural resources?:

- Using natural fertilizers and phytosanitary products.
- Biodiversity, crop rotation and diversification.
- Eliminating the use of chemical pesticides and herbicides.
- Betting on organic or ecological crops.

6. Sharing economy

This trend is linked to point one, in which the circular economy was discussed. The collaborative economy is based on lending, renting, buying or selling products based on specific needs and not so much to obtain economic benefits. Some examples could be companies that, in recent years, have been very well received by consumers such as Airbnb, Uber, BlaBlaCar...

7. Carbon capture and recycling

An American study by the Climate Accountability Institute revealed in 2019 that 35% of carbon dioxide and methane emissions, related to energy production, are located in only 20 companies. In total these companies have emitted 480.19 billion tons of carbon dioxide emissions.

To reduce and recycle CO2, the Institute for Integrated Cellular Materials Sciences (iCeMS) at Kyoto University (Japan), developed a new material capable of selectively capturing carbon dioxide molecules and converting them into useful organic materials. Although it is still in the testing phase, this is a first step to counteract the emissions that are produced on our planet.

8. Local renewable energy revolution

It is estimated that between 1.2 and 1.5 billion people in the world still do not have access to electricity. Renewable energies try to reduce this number by promoting clean and locally produced energies, reducing the costs of imports and energy transport. Technological advances and the internet of things represent a revolution for those excluded communities, energetically speaking.

These trends do nothing more than ratify the green economy as a real alternative to face the economic and environmental crisis of contemporary societies. The commitment to this new model could contribute to the maintenance of a healthy environment and an adequate use of services, both for the present generation and for future ones.

Objectives of the green economy

The main objective of the green economy is to achieve a social, economic and environmental balance, so that production processes generate wealth in societies and do not harm the environment. A paradigm shift on the current economic model.

In this sense, the legislation of the European Union has established more than 130 independent environmental objectives, which member countries must meet between 2010 and 2050:

- Seek equity in society, combat scarcity and reduce threats to the environment: Efficient use of resources, carbon reduction and social responsibility.
- Increase in public resources allocated to the fight against carbon emissions: Firm commitment to energy efficiency and biodiversity.

Once we know the objectives, in order to measure and assess progress in achieving them, the green economy focuses on analysing, evaluating and measuring three pillars:

- Analyse the level of economic transformation and the growth of green companies.
- Evaluate the impact of development based on the depletion of resources and their use.
- Measure the social impact, through the study of the population level with access to basic resources, education and health.

Trends and objectives of the green economy in Spain: The path to sustainable development

The green economy is currently responsible for half a million jobs in Spain, which represents 2.5% of the total employment in our country. This is stated by the International Labour Organization (ILO), which makes it clear that it is a figure that could multiply in the next decade.

GREEN JOBS

Green jobs in Portugal and Malta

Companies in Portugal are beginning to recognize this requirement, and there is already a demand for sustainability experts. In this perspective, pursuing a profession in sustainability could be a sure bet in the face of a "greener" and more profitable future.

The Portuguese Recovery and Resilience Plan (PRR) anticipates that 47 percent of the money will be used for environmental sustainability in order to gain access to community funds. Furthermore, each project that receives community funding will be required to evaluate environmental impacts and demonstrate how it contributes to the environment, implying that businesses will have a team of sustainability experts working on it. The PRR can play a very important role in accelerating green jobs if, in fact, what is between the lines is fulfilled. Malta is a country that wants to focus much more on sustainability in the future. Therefore, there are also some jobs in Malta, which should promote this goal.

The following jobs in Portugal have been recognized as having the best chance of being valued:

- Sustainable cuisine – valuing the component of healthy food and with lower environmental impacts;
- Technicians specialized in installation and maintenance of more energy efficient equipment;
- Workshops for electric vehicles;
- Experts in the design and implementation of efficient energy systems;
- Sustainable materials consultant for construction;
- Industrial mechanics capable of adapting old machinery to new, more efficient processes;
- Lawyers in the Environmental area;
- Specialists in green accounting;
- Urban farmer;
- Ecological builder;
- Renewable energy engineer;
- Specialist in waste management/circular economy;
- Expert in sustainability;
- Sustainable hospitality;

- Voluntary internships in the field of environmental management;
- Sellers of regional products;
- Local farmers.

Malta is relying a lot on renewable energy in the future, which is why professions like plumbers and engineers are much more in demand. Also, construction companies for the renovation are needed.

Malta has to follow three directives according to the European climate and energy package:

- 20% cut in greenhouse gas emissions (from 1990 levels).
- 20% of EU energy from renewables.
- 20% improvement in energy efficiency.

Given the government of Portugal's obligations in terms of climate, renewable energy, green taxation, and sustainable financing, among other things, universities must be able to prepare future generations for future occupations. As a result, it's exciting to see some Portuguese universities moving in this direction, with postgraduate courses, executive courses, and MBAs that integrate sustainability as a core theme or as a transversal component.

By 2030, Europe is predicted to generate about nine million jobs, with Portugal contributing nearly 70,000 of those, including 50,000 new "green jobs." In reaction to this new reality, the country's human resources must be trained, qualified, and requalified.

The economy's green electrification provides fertile ground for job growth. According to the Minister for the Environment and Climate Action, if renewable energy consumption is currently about 60%, it will be over 80% by 2030. According to Pedro Amaral Jorge, President of the Portuguese Renewable Energy Association, this target indicates that Portugal will produce nine times more solar energy and double its wind energy production capacity.

According to Deloitte, the renewable sector will account for 4.5 percent of GDP (11,000 million euros) in 2030, with strong investment in jobs in the production and maintenance of generation equipment, the energy efficiency sector, and the construction of electric vehicles

and their components, resulting in a tripling of current jobs (from 50 thousand to around 160 thousand). This investment will be mostly funded by European Union "green bonds" indexed to the pandemic recovery package, as announced by Ursula von der Leyen in the State of the Union Speech in September 2020 - which will cope with the pandemic.

Green jobs in Slovenia

There is no clear-cut definition of 'green jobs' but in the broadest sense the term applies to all employment and entrepreneurial opportunities that arise through any action to prevent, limit, minimise or correct the negative impact of human beings on the environment. The jobs are mainly related to combating climate change, production of energy from renewable sources, reducing carbon emissions, increasing energy efficiency, waste and water management, improving air quality, and restoring and preserving biodiversity. Green jobs tend to stay local, as they are not easily outsourced. The green economy has also shown to be resilient to business cycle changes. Developing the green economy stimulates demand for both high and low skilled labour.

The transition to a green economy is an opportunity to create green jobs in the areas of sustainable supply and forest timber chain, waste recycling, water management, renewable energy sources, food production and processing. In order to promote the creation of new green jobs, it is necessary to ensure a link between measures in the labour market (promotion of employment, job creation, training and education) with measures for the transition to a green economy.

Slovenia has set another good example in the region when it comes to sustainable development efforts, offering EUR 1.5 million in subsidies to employers who hire people in green jobs in open call on February 2021. The funding is provided by the Ministry of the Environment and Spatial Planning from its climate change fund. Eligible employers in Slovenia will receive financial subsidies of EUR 340 per month for a period of two years for hiring an unemployed person in a full-time green job, which amounts to a total of EUR 8,160 per employee. Depending on the number of new employees in green jobs, an employer will be able to receive two to ten subsidies.

With these incentives, the ministry seeks to contribute to the greening of the Slovenian economy, reducing greenhouse gas (GHG) emissions, and stepping up efforts to use energy and resources more efficiently. Green jobs help achieve climate goals and protect the environment. Green jobs, such as recycling workers, solar panel installers, environmental consultants, or green building designers, are an important aspect of sustainable development, as they can help achieve climate change goals, conserve nature and environment, and increase human potential in the transition to a low-carbon society.

Among other criteria, the public call takes into account what is described as "shades of green." For example, less green jobs include construction technicians and hotel managers, while greener

ones include foresters and waste sorters. Products, services, and workplace activities in line with climate and environmental goals will also be taken into account. The employer will be able to demonstrate an additional contribution with the obtained standards and certificates (ISO 14001, EMAS, and others), and the criteria will also include the employer's products and services and workplace activities that are in line with climate and environmental goals, according to the ministry.

Tourism

Sustainable development is a fundamental policy of Slovenian tourism. Sustainability principles refer to the environmental, economic and socio-cultural aspects of tourism development. To ensure long-term sustainable development a suitable balance needs to be established between tourism's impact on the environment, tourism workers, local communities and tourism service providers.

Concerning tourism, environmental management is becoming a competitiveness factor. However, hotel managers are less critical than quality and image factors. The awareness of making eco-friendly and more sustainable the tourism sector is gaining momentum, which will lead to an increase of more significant standards for environmental and economic sustainability. Hotel employees find it crucial to be employed in a socially responsible company.

When comparing rural tourism between Slovenia and other Balkan countries, Slovenia shows a better developed rural tourism, considering that local and local stakeholders have joined the forces to achieve European standards. Ljubljana presents good potential for sustainable urban tourism as residents demand the cultural and green type of tourism increases. Even sports events can contribute to developing a more sustainable and greener economy. Major sports events, such as the Ljubljana marathon (the most successful in sustainability implementations), the events of Povežimo soline and Eurofest are drivers of sustainability, found.

Green jobs in Turkey

The environment and the world of work are inherently inter-connected. Businesses and jobs depend on natural resources, ecosystem services and nature at large. Thus, economic and social development hinge on a healthy environment. Already today the effects from climate change and environmental degradation can be felt globally, disrupting and eroding the foundations of millions of jobs and livelihoods.

The need for a just transition to a low-carbon and resource efficient economy is of particular urgency and requires adjustments throughout all occupations, businesses and economies as a whole.

While in some instances disruptive, the transition to more just societies and economies comes with huge opportunities to boost the economy, create more jobs and improve workplace quality. According to ILO research, the implementation of the Paris Agreement bears the chance to create 18 million more jobs by 2030 compared to carrying on with business-as-usual.

To ensure such positive employment effects, it needs deliberate efforts by governments, businesses and workers to shape the pathway towards a greener economy. This requires knowledge of the key concepts around green jobs.

According UNEP Green Jobs in 2008 Report, forward-thinking government policies remain indispensable. They are important for providing funding of green projects; overall goal- and standard-setting beyond the time horizons typical in the business world; providing infrastructure that private enterprises cannot or will not create; and creating and maintaining a level playing field for all actors.

Key policies include:

- Subsidies: Phase out subsidies for environmentally harmful industries, and shift a portion or all of those funds to renewable energy, efficiency technologies, clean production methods, and public transit.
- Carbon Markets: Fix the current shortcomings inherent in carbon trading and Kyoto Protocol-related innovations like the Clean Development Mechanism so that they can become reliable and adequate funding sources for green projects and employment.
- Tax Reform: Scale up eco-taxes, such as those adopted by a number of European countries, and replicate them as widely as possible. Eco-tax revenues can be used to lighten the tax burden falling on labour while discouraging polluting and carbon-intensive economic activities.
- Targets and Mandates: Ensure that regulatory tools are used to the fullest extent in the drive to develop greener technologies, products, and services—and thus green employment. This includes land-use policies, building codes, energy-efficiency standards (for appliances, vehicles, etc.), and targets for renewable energy production.

- Energy Alternatives: Adopt innovative policies to overcome barriers to renewable energy development, including feed-in laws that secure access to the electrical grid at guaranteed prices.
- Product Takeback: Adopt "extended producer responsibility" laws (requiring companies to take back products at the end of their useful life) for all types of products.
- Eco-Labelling: Adopt eco-labels for all consumer products to ensure that consumers have access to information needed for responsible purchasing decisions (and hence encouraging manufacturers to design and market more eco-friendly products).
- R&D Budgets: Reduce support for nuclear power and fossil fuels and provide greater funding for renewable energy and efficiency technologies.
- International Aid: Reorient the priorities of national and multilateral development assistance agencies as well as export credit agencies away from fossil fuels and large-scale hydropower projects toward greener alternatives.

Turkey and Italy: Towards a green job strategy

In Turkey, the ILO project "Decent Work in a Green Economy" focused on the employment aspects of national efforts to a transition to a green economy. The report "Decent Work in the Green Economy. Business Cases from Turkey" presents the various case studies and aims to shed light to policy makers on the role of enterprises in the green economy transition process so that the necessary policy framework can be put in place accordingly. This qualitative analysis was presented at the "Turkey Green Jobs Conference" on 26 march 2015, which concluded the project.

The "Project Decent Work in the Green Economy", funded by the Flemish Government, aimed at contributing to the creation of green jobs for women and men as a means to poverty reduction and social inclusion through the strengthening of national green economy initiatives. Its objective was to improve the ability of governments and social partners to assess the scope for green jobs and to formulate, monitor and review relevant gender sensitive strategies, policies and programmes.

Project activities initiated with a first national workshop on green jobs, held from 24 to 26 June in Ankara 2013. This capacity building event targeted government, workers' and employers' representatives and introduced the concept of green and decent jobs and ILO's green jobs development strategies. This included a focus on green entrepreneurship and green enterprises, skills development, social dialogue and sector strategies.

The UN speaks of 1.25 billion people employed in sectors at very high risk of closure. But precisely the crisis, according to the UN, can become the accelerator for an increasingly green, resilient and inclusive world of work, not least because in the meantime climate change has not stopped.

The number of green jobs in Italy surpassed 3 million: 3,100,000 units, 13.4% of the total employment. In 2018, green jobs grew over 100.000 units compared to 2017, with an increase of 3.4% compared to the rise of 0.5% for other professions. Personal data, which reveal the virtuosity of youth entrepreneurship, are interesting: indeed, 47% of companies led by under 35 promoted eco-investments. Senior entrepreneurs who wanted to promote sustainable investments consist of only 23% instead[3].

Trying to make a regional classification, we note that in first place for the absolute number of contracts related to green jobs (123,380, just over a quarter of the national total) is Lombardy, followed by Emilia Romagna (45,562), Lazio (45,480), Veneto (42,654), Piedmont (38,869), Campania (29,467), Tuscany (23,637), Apulia (20,912), Sicily (19,994) and Friuli Venezia Giulia (11,546). Looking at the provinces, however, and the planned activations of green jobs contracts, Milan stands out, with 63,242 new positions, and Rome, with 37,570, followed by Turin, with 23,478, Naples, with 16,761 activations, and Brescia, with 14,977.

In 2019, more than half a million new contracts were signed in this area, almost half of which (46%) were permanent contracts, according to Tessa Gelisio and Marco Gisotti, authors of the book '100 Green Jobs to Find a Job'. Gisotti, director of Green Factor, also edited the 'Ecco' project with Legambiente, according to which almost 80% of companies required some kind of environmental competence from new recruits, not only graduates but also diploma holders[4].

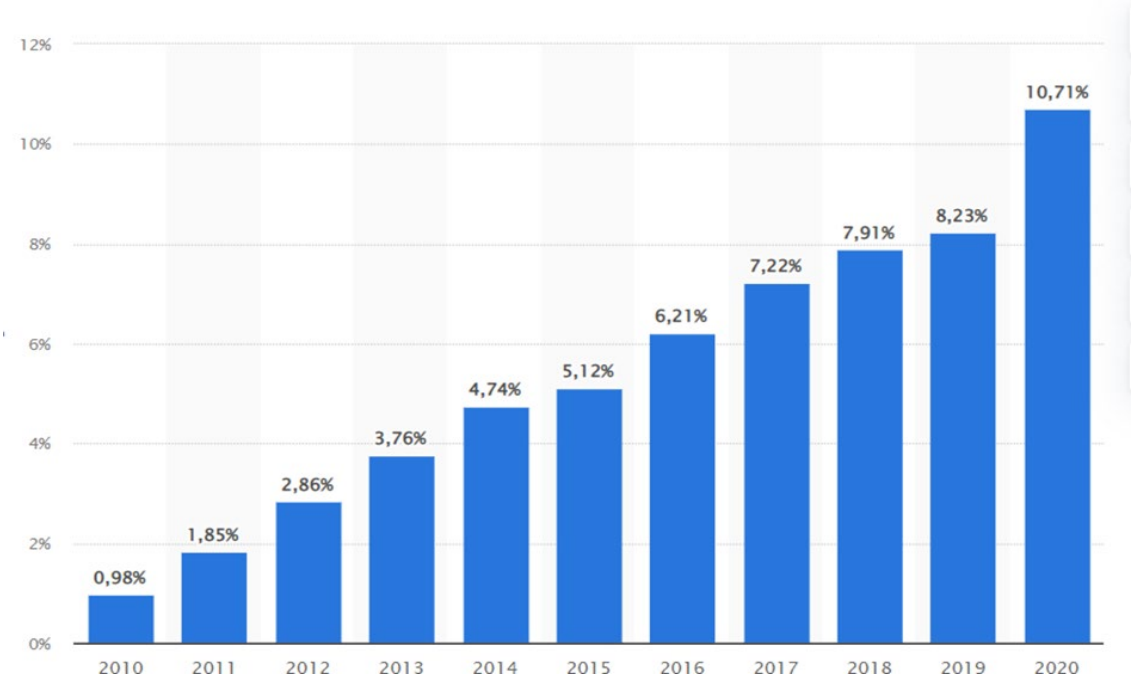
[3] https://www.nonsoloambiente.it/greenitaly-2019-italy-invest-green-economy
[4] https://www.enelgreenpower.com/it/storie/articles/2020/10/professioni-green-energie-rinnovabili

ENERGY TRANSFORMATION

Renewable energy supplied 59% of electricity consumption in Portugal in 2021, of which 26% correspond to wind energy, 27% to hydroelectricity, 7% to biomass and 3.5% to photovoltaics.

According to Apren's Renewable Electricity Bulletin, "between January 1 and 31, 2022, Portugal was the fourth country with the highest renewable incorporation in electricity generation, behind Norway, Denmark and Austria.

The following graph shows the development of renewable energies in the gross final energy consumption in Malta.



Slovenia has a rich, more than 100 years long tradition of hydroelectric power plant construction entirely covered by Slovenian companies. Hydro energy makes up 30% of Slovenian electricity production and is one of the most important renewable energy sources. Slovenian companies have engineered and built numerous hydroelectric power plants in Slovenia and abroad. In 2019, Slovenia had 8,038 solar power units in total with a capacity of 313 MW. These installations produced 268 GWh and contributed to a 233% increase compared to 2018. Solar energy solutions are often part of the research process. Slovenian researchers from the Faculty of Electrical Engineering of the University of Ljubljana participated in the development of a record-breaking tandem solar cell with the highest ever, 25.5% efficiency of converting light energy into electricity. Slovenia can boast a National Institute for Chemistry, which is globally renowned for its expertise

in the field of development of coloured coatings for low-temperature solar absorbers, as well development of coatings for concentrated solar power plants.

In Italy, energy efficient living is one of most dynamic categories with constant development of new solutions and strong commitment to existing ecosystem conservation. It represents the integration of engineering, efficient energy solutions and urban management systems. Slovenian companies have excellent expertise in building highly efficient and sustainable prefabricated buildings, from commercial buildings to residential homes. Our companies have received numerous international awards for their innovative sustainable solutions. Some of the top innovations are a climate-sensitive green roof system, an insulating glass facade system and a unique membrane system with excellent thermal insulation.

In 2019 primary energy consumption was 151.5 Mtoe: the consumption has been decreasing since 2005 returning to consumption levels of the first half of the 1990s. The final energy consumption is also decreasing: in 2019 amounted to 111.2 Mtoe, -8.9% in the period 2000-2019. The corresponding energy intensities fell in the period 2000-2019: primary energy intensity decreased by 15.2% and final energy intensity by 12.5%. The trend of both energy intensities was decreasing since 2005.

The energy efficiency for final consumers, as measured by ODEX, improved by 18.1% over the period 2000-2019, with an average rate of 1% per year from 2000 to 2019. In industry the energy efficiency improvement has been steady and significant: 1.6% per year over the period 2000-2019. All industrial branches contributed to the progress in energy efficiency of industry sector, more rapidly in the years 2004-2011: chemicals is the most efficient branch. The progress in transport sector has been constant (1.4% per year). The residential sector had a steady progress in energy efficiency but smaller than in 1990s caused by the changes in lifestyle and dwelling comfort: 0.6% per year over the period 2000-2019.

The National Recovery and Resilience Plan (NRRP) allocates €28 billion for energy efficiency. The interventions will be destined to buildings renovation for residential buildings (Superbonus, Ecobonus and Sismabonus), judicial buildings, schools and hospitals, and to promotion of efficient district heating system. The NRRP also includes interventions in favour of sustainable mobility through Mission 3 “Infrastructures for sustainable mobility”: investments in the railway network to enhance the transport of passengers and goods by rail.

The National Integrated Energy and Climate Plan (PNIEC) sets the national targets to be achieved by 2030 for energy efficiency, renewable energy sources and reduction of CO2 emissions, energy

security, development and sustainable mobility. Compared to the binding cumulative energy savings target of 51.44 Mtoe, the proposed measures lead to a cumulative estimated savings of 57.44 Mtoe. 2030 target will be pursued through Obligation Scheme of White Certificates and a mix of fiscal, economic and regulatory alternative measures already active. Some of them will be reviewed and strengthened[5].

In Turkey, maximizing exploitation of domestic primary energy resources and securing reliable and affordable energy for a growing economy in an environmentally sustainable manner have been, and remain, Turkey's core energy policy priorities.

The 11th National Development Plan (2019-2023) modified energy sector targets; the electricity generation from renewables as 38.38%, electricity demand as 375.8 TWh and installed capacity as 109,474 MW for 2023. Turkey already generates more electricity than before from renewables - 42% in 2020.

With the new renewable energy support mechanism YEKA, MENR declares Renewable Energy Resource Zones (YEKA) where renewable energy capacities are to be tendered. In addition, a "Green Tariff" (YETA) was developed for those citizens preferring to use electricity generated from renewable energy sources.

The Government has also facilitated access to renewable energy financing provided by international financial institutions such as the World Bank Group and the European Bank for Reconstruction and Development, and bilateral institutions. The country has increased its installed renewable energy capacity by 245% over the past 16 years, today ranking sixth in Europe by installed wind and solar power capacity.

The National Energy Efficiency Action Plan was adopted in 2017. It envisages 55 actions under 6 categories – buildings and services, energy, transport, industry and technologies, agriculture, and cross-cutting areas - which aim at achieving a 14% decrease in energy consumption by investing US$10.9 billion by 2023 into energy efficiency measures.

Turkey has been diversifying its energy portfolio by continuously increasing the share of renewable and environment-friendly sources. In its 11th National Development Plan, Turkey commits to add 10,000 MW solar and 10,000 MW wind power to its energy generation capacity.

[5] https://www.odyssee-mure.eu/publications/national-reports/energy-efficiency-italy.pdf

Initial green finance initiatives have been mostly focused on renewable energy investments, and chiefly financed by bank loans. To put it in numbers, as of December 2020, the loans extended by the banking sector to the energy sector amounted to US$30 billion, and approximately 40% of this amount was used for financing renewable energy projects.

CLIMATE TRANSFORMATION

Climate change refers to long-term shifts in temperatures and weather patterns. These shifts may be natural, such as through variations in the solar cycle. But since the 1800s, human activities have been the main reason of climate change, firstly due to burning fossil fuels like coal, oil and gas; generating greenhouse gas that are like a blanket wrapped around the earth and causing the raising temperatures.

Portugal is already experiencing increasing climate change today, with global warming currently at approximately 1°C above pre-industrial levels, which will have impacts for humans and ecosystems.

In Portugal climate impacts are increasingly being recognized by policy circles.

During European Council meeting in December 2019, president Von der Leyen stated that "Portugal is one of the countries most affected by climate change". In Portuguese territory the temperature has increased in the past decades and are planned to continue to grow.

Annual precipitation has decreased and climate models predict that this decrease will continue.

Rising sea levels create not only stress on the physical coastline, but also on coastal ecosystems. Heatwaves, storms and droughts have already affected Portugal and will continue to do so. Extreme precipitations are increasing especially in north-eastern Portugal in winter and spring. Wildfires are occurring more frequently and on a greater scale than originally expected. Relative to other Mediterranean countries, Portugal is the country that has suffered most from forest fires: during the last 30 years, 35% of the region's fire incident and 39% of the area affected each year were located in Portugal. These impacts will have sectoral consequences. In the agricultural sector, drought stress is largely responsible for yield gaps. A reduction in crop productivity together with increasing water demand for irrigation are projected. Forest ecosystems will move towards higher altitudes and latitudes and will be exposed to higher fire risks.

The Portuguese economy will also be affected as flows in tourism shift and climate-related hazards increase. The Portuguese wine industry is and will continue to be affected by climate change and olive trees are also at great risk. Negative economic impacts from climate change will also be felt in the fishing sector.

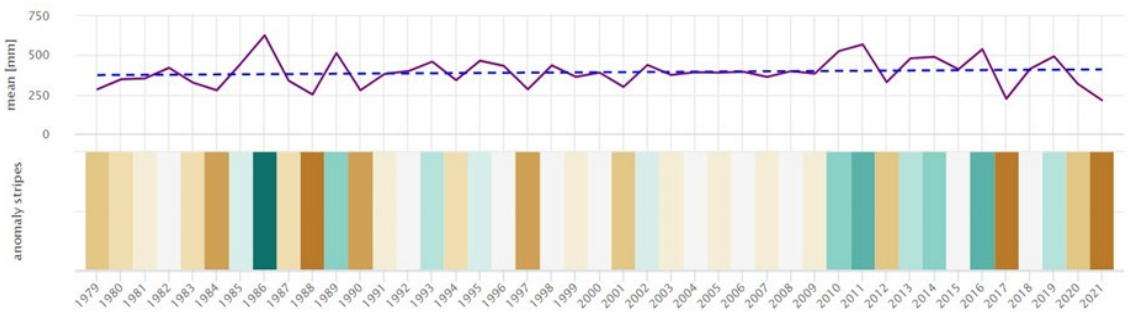
Climate change effects human health and lead to fatal illnesses: increasing temperatures cause heat stress and increasing death rates from respiratory diseases, specially in elderly people that

live in the interior of the country. Climate changes also has an impact on air quality which has consequences for human health.

According to the WHO, it is the smaller countries, such as Malta, that need to protect themselves from climate change. Sea level rise, heat waves, floods, droughts and water shortages are to be expected.

In Malta, for example, it can be observed that the average annual temperature is increasing every year, and for the last two years it has even been above the predictions of the course of climate change.

In contrast, it can be seen that the precipitation rate is decreasing from year to year. Here, too, the development is not proceeding as expected.



Climate transformation in Slovenia

Clean mobility

Concerning green transportation and thanks to the EU's accession, Slovenia has adhered to the EU guidelines for electric vehicles. However, the number of electric cars remains lower than the EU Commission expects it; Slovenians consider price one of the significant barriers. Subsidies from the Eco Fund and loan schemes are available for application, guidance and grants available only for battery electric vehicles and plug-in hybrid vehicles. However, these grants are still unused because of low electric car circulation.

Green propulsion is a key chapter in many global and local strategies for a clean future, which also applies to Slovenia. Its key contribution is the production of electric means of transport, components and systems for electric vehicles. Stand out solutions include highly customizable autonomous cargo aircraft with an electric engine and vertical take-off and landing, various sharing systems with e-vehicles and electric micro mobility means of transport. Finally, yet importantly is hydrogen-powered mobility with the first four-seater hydrogen-powered aircraft. Slovenia is on the road to take its sustainable narrative to a higher level in the future. The fields of environmentally friendly technologies, cleaner, cheaper and healthier forms of private and public transport, energy sector decarbonization, efficient energy construction and global environmental standards improvement are seeing the most growth in innovations.

Waste management

In terms of waste management, only two of the seven waste management centres in Slovenia are considered acceptable, but there is ample room for improvement. Malinauskaite et al. (2020) state that even if Slovenian municipal waste recycling rates are among the highest in Europe (59% according to the Annual Report 2019;4), the various municipalities' performance differs.

The waste value chain, from waste collection to sorting and recycling, has the potential to increase decent work and green business development. Sustainable waste management is an opportunity to promote social inclusion, as well as upgrade the quality of existing jobs. In this course, participants develop business solutions and facilitate the transition to greener economies.

Climate transformation In Italy

Development co-operation and climate action in developing countries is funded by a variety of entities in Italy, the main entities being the Ministry of Economy and Finance (MEF), the Ministry of Foreign Affairs and International Co-operation (MAECI) and the Ministry of Ecological Transition (MITE). Every administration allocates its own funds in line with the PPPD. Italy considers the alignment of all finance flows, domestic and international, with a pathway to low greenhouse gas (GHG) emissions and climate-resilient development as a key factor leading to the achievement of mitigation and adaptation goals[6].

The Italian Co-operation pursues environmental goals within the scope of its actions:

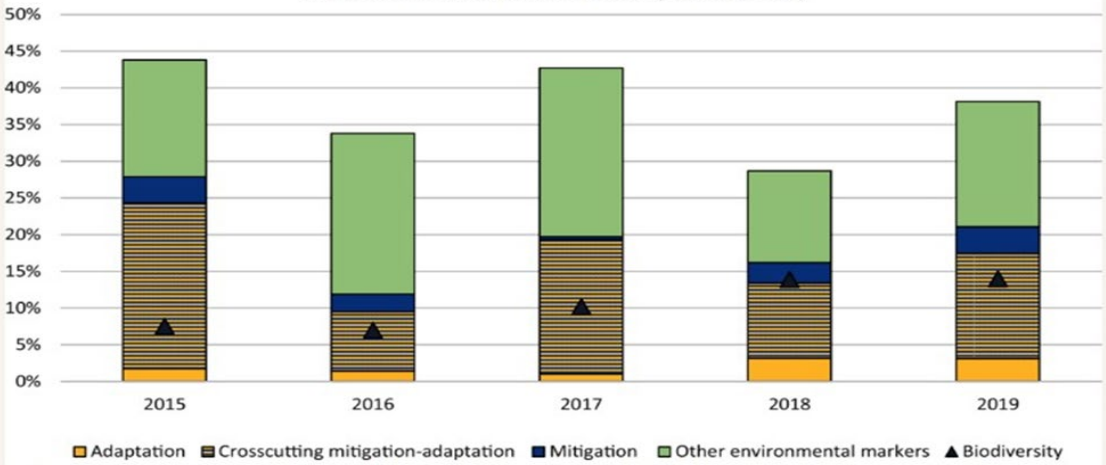
[6] https://www.oecd-ilibrary.org/sites/c1f52d35-en/index.html?itemId=/content/component/c1f52d35-en#boxsection-d1e10233

- Making sure that any kind of programme and action does not cause degradation of the ecosystem (“compliance”).
- Generating concurrent environmental benefits in the actions involving other development sectors (“integration”).
- Promoting programmes that have the protection or recovery of the ecosystem as the main goal (“mainstreaming”).

Box 1. **Creditor reporting system's environmental and climate markers**

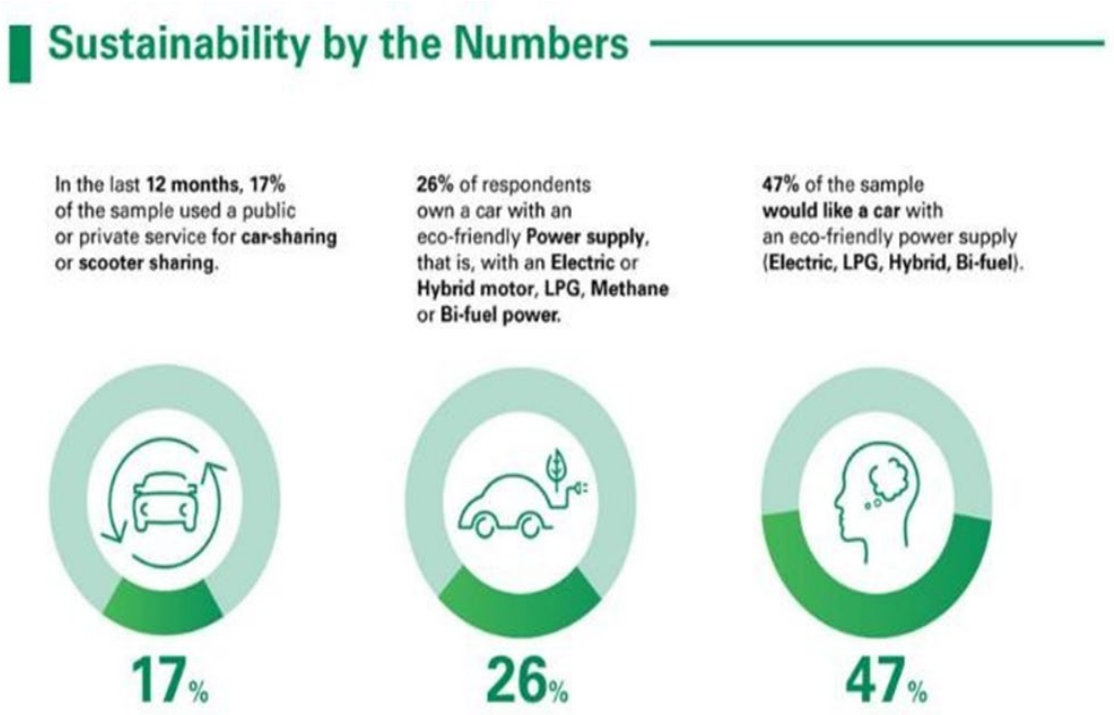
Figure 1. **Italy's integration of climate objectives**

As a share of bilateral allocable aid (commitments)



Note: “Other environmental markers” include biodiversity, environment and desertification that do not overlap with mitigation and adaptation. Biodiversity-related ODA is integrated in the columns, as well as presented separately for better visibility.

Source: OECD (2021), Creditor Reporting System (database), https://stats.oecd.org/Index.aspx?DataSetCode=crs1



Italian consumers are assigning more importance to environmental protection and choose to purchase from companies that integrate environmental and social sustainability in their business models.

63% and 64% of subjects consider it important for companies to pay attention to the reducing polluting emissions and greenhouse gases, respectively, and 62% of them reacted favourably to the responsible management of waste through reuse and proper disposal.

Just over half of those interviewed favour the conscious and responsible consumption of energy, natural resources and water, as well as the protection of biodiversity, plants and animals and the ecosystems where they live. But there is an equally important segment of people who are not sufficiently informed on the importance of renewables in boosting the energy transition and decarbonization.

Climate transformation in Turkey

Turkey is particularly vulnerable to the impacts of climate change. Average temperatures are rising, precipitation amounts are decreasing, and climate-related hazards, such as floods and droughts, are becoming more common. These shifts hinder agricultural yields, endanger food security and threaten the safety and welfare of hundreds of thousands of people in Turkey.

Turkey ratified the Paris Agreement on climate in October 2021 and renamed the Ministry of Environment, Urbanization and Climate Change, affirming its commitment to climate action and

long-term greener growth. This will drive increased demand for green finance and a stronger role in climate action for the private sector in the future.

Strenghening Climate Resilince

Climate Change Adaptation is the process of adjustment of human systems and societies to the impacts or expected impacts of climate change. Resilience is the capacity of a system to cope with, or recover from, those impacts, while retaining the essential components of the original system. Strengthening the resilience of a system to withstand climate- related shocks or stressors (defined as Climate Resilience) is where adaptation and resilience intersect.

Turkey is currently considered a water-stressed country and, with rapid population growth, is predicted to be water-scarce by 2030. Recognizing this threat, the Turkish government has taken a step to enhance irrigation systems to prevent water wastage, and the Regulation on Irrigation Systems within Rural Development Supports (communique no. 2021/7) published in February 2021 provides various incentives to new irrigation systems. Soil erosion and desertification, and the degradation of forests and forest ecosystems are also prominent problems. To maintain its success in economic growth, wellbeing and poverty reduction, Turkey sees the necessity for a stronger focus on more sustainable and greener growth.

Turkey is also particularly vulnerable to the impacts of climate change, which have already manifested in an increase in annual mean temperature, changes in the precipitation regime, and increasing numbers of climate-related hazards such as floods and droughts. Climate change is projected to negatively impact surface water availability, increase the frequency and severity of flooding incidences, and prolong arid seasons and drought episodes, which will affect agricultural yield and threaten food security.

Priority areas for climate action in Turkey

Turkey's climate change action directions are set in the National Climate Change Action Plan and in the National Climate Change Adaptation Strategy and Action Plan. The comprehensive National Climate Change Adaptation Strategy and Action Plan foresees adaptation measures to address water resources management (to ensure robust, climate resilient systems), agriculture and food security (climate resilience, protection of soil and agricultural biodiversity, and water management in agriculture), ecosystem services, biodiversity and forestry, natural disaster risk management, public health, air quality management and cross cutting issues.

Activities identified for green financing in the private sector largely focus on the energy and water sectors. In addition to activities identified by the line ministries, the Development and Investment Bank of Turkey (TKYB), which is one of the major public agents supporting the private sector, highlighted the potential for enhanced climate action in the following areas:

- Energy:
    - Improvements in energy efficiency and use of renewable energy in district heating systems (geothermal energy);
    - Solar panels and offshore wind energy production;
    - Loss reduction in electricity distribution and in natural gas distribution systems;
    - Extension of natural gas distribution networks;
    - Smart grid distributed system installations for energy efficiency and resource efficiency purposes.
- Water:
    - Loss reduction in water supply systems;
    - Improvement of wastewater treatment and recycling in industry and communities.

Since 2021 Turkey has been working together with the World Bank on identifying options for innovative approaches to mobilize private investments in climate change adaptation for several priority areas. Further prioritization of areas to direct green finance will need to consider climate actions, where:

(i) Both mitigation and adaptation (in waste, transport, agriculture, forestry and land use, and urban development) is feasible;
(ii) A contribution to addressing country-specific environmental challenges is present, and
(iii) A sharper focus is put on urgent requirements for strengthening climate resilience in Turkey (i.e., resilient coastal cities).

While the demand exists, efforts to increase the flow of finance towards green projects and green entrepreneurship need to be focused on two fronts:

(i) How to mobilize resources and attract public and private capital for green investments, and
(ii) How to deploy resources in the most effective way to achieve the desired results.

- Climate change is already affecting Turkey. The country is hotter, drier and is experiencing more floods and drought.
- Considerable efforts have been made to reduce harmful carbon emissions which cause climate change, but there is a potential to do much more.
- Turkey's financial sector can step up its role in delivering on the green agenda and mobilizing capital for climate action.

SUSTAINABILITY

Sustainability means meeting our own needs without compromising the ability of future generations to meet their own needs. In addition to natural resources, we also need social and economic resources. Sustainability is not just applied in environmentalism. Embedded in most definitions of sustainability we also find concerns for social equity and economic development.

Ecological integrity is maintained, all of earth's environmental systems are kept in balance while humans at a rate consume natural resources within them where they are able to replenish themselves.

In terms of sustainability the biggest problem that Portugal faces is water shortage. According to the Instituto do Mar e da Atmosphere (IPMA), about 1% of the territory is in mild drought, 54% in moderate drought, 34% in severe drought and 11% in extreme drought. The issue of lack of water is not recent and has been getting worse, being one of the main effects of climate change in Portugal.

Water management, as well as waste management and decarbonization are three major environmental challenges in Portugal.

Portugal is an increasingly hot and drier country (2020 was the 4th hottest year in the last 90 years) and with increasing water scarcity (66% of the territory was in weak and moderate meteorological drought in 2020). And 2022, as we have seen, can go in the same direction, with great impact on the whole of society. "Hot and dry years can have strong impacts on surface and underground water availability, on the occurrence of fires, on the reduction of hydropower production and on the emission of greenhouse gases, either through emissions when fires occur, or in the production of energy in thermoelectric plants", explains Nuno Lacasta, president of APA.

In terms of sustainability the biggest problem that Malta faces is air pollution, waste production and plastic problems.

Due to the overuse of plastics, Malta is facing vast waste management problems. According to the European statistical system, the total amount of solid waste generated in Malta during 2018 was 2.6 million tonnes.

The National Air Pollution Control Programme took initiative to reduce air pollution in Malta by shifting to natural gas to generate electricity and closed the Marsa Power Station and observed a decrease in Sulphur dioxide by 94.7% and nitrogen oxides by 91% between 2005 and 2017.

Under the new administration rules known as circular economy, by 2025, Malta should recycle at least 55% of municipal waste from households and businesses. The circular economy works on the principle of recycling materials and giving it back to the environment without harming it. Circular Economy involves reduction, reuse and recycling of materials to protect the environment from degrading. The main aim of the Circular Economy is to give back a new recyclable product to the environment. It is the solution to reduce waste production and plastic problems in Malta.

Sustainability in business

Sustainable development (and sustainable business development) has been defined in many ways. A frequently quoted definition is: "development that meets the needs of the present without compromising the ability of future generations to meet their own needs." In the past, development of businesses, and the economic growth they drive, have generally been unsustainable from an environmental perspective. Fossil fuels, including oil, diesel, kerosene, and natural gas, which the current economic system depends on, are finite.

Burning them for energy damages the environment and contributes to climate change. Extractive industries, such as logging and mining, remove resources in minutes that took hundreds of millions of years to form.

Almost everything we buy is packaged in plastics that do not decompose, but will stay in landfills, or worse, in oceans, long after the person who used them is gone. Businesses must be part of the solution to these problems. A sustainable business strives to balance the economic (financial), social (people), and environmental (biodiversity, ecosystems) benefits of the business as part of its core business objective.

For a business to be sustainable, it must not exploit resources or people to improve profit margins. A sustainable business knows that if it depletes the resources that it is using faster than they can be generated, it cannot go on indefinitely. Similarly, viewing itself as part of the broader community, it ensures that its staff are paid fairly and have a good quality of life.

COMPANIES PERSPECTIVE ON THE GREEN ECONOMY

A green economy is the practice of sustainable development through the support of public and private investment to create an infrastructure that fosters social and environmental sustainability.

Portugal has a significant "green resource" as the country's biodiversity is unique in the European context. This reality is essential for the development of other economic activities such as agroforestry, commerce and industry. A new consortium for the green economy proposes to explore these new strategic opportunities for companies.

The new economic model necessary to develop Portugal in an international context of strong population growth, scarcity of natural resources and the availability of cutting-edge technologies, will be based on the valorization of natural capital and the inclusion of environmental issues as competitive factors for the regions and companies.

In this sense, TTerra, SystemicSphere and SaeR join in the creation of the Consortium for the Green Economy (CEV), which aims to prove the theory that the environment, the economy, strategy and finance, can and should work in set. Multidisciplinary is applied in this Consortium:

We have no doubt that the environment is the real win-win business and the green economy proves it. Our ideas are based on a set of basic assumptions for the growth of a green economy:

- *Thriving on sustainable production and consumption;*
- *Educating (formal and informal education) for green citizenship;*
- *Associating eco-innovation in entrepreneurship practices;*
- *Trivializing the concepts of "circular economy", "zero residue", "zero energy balance", etc.*

In this context, the Consortium for the Green Economy believes that the country should develop a set of activities that will contribute to the creation of sustainable, lasting and inclusive wealth.

These activities need a governmental framework, but also a strong active participation by all stakeholders: private and public companies, NGOs, Schools, Universities and the population in general.

Green economy in Spain

The green economy is currently responsible for half a million jobs in Spain, which represents 2.5% of the total employment in our country. This is stated by the International Labor Organization (ILO), which makes it clear that it is a figure that could multiply in the next decade.

Green economy in Italy

The "GreenItaly 2019 Report" depicts a different and prosperous image of Italy, which is capable of arranging resources for sustainability purposes. The analysis, which is carried out by Symbola Foundation and Unioncamere, is supported by Conai, Ecopneus and Novamont, is in partnership with Si.Camera and Ecocerved and is endorsed by the patronage of the Ministry of the Environment.

According to the report, which was presented in Rome in October 2019, over 432.000 Italian companies have invested in green products and technologies in the last 5 years to reduce the environmental impact, save energy and contain CO2 emissions by the end of 2019. In particular, these are 21.5% of Italian companies; this is 7.2 points higher than the numbers acknowledged in 2011[7].

The Report shows good news for Italian environmental performance compared to other European countries. In the last 10 years – according to the report – the attention to renewables has increased. The Italian industrial system has been placed as second among the EU's big ones for energy inputs/units of product – with 14.8 tons of oil.

Green economy in Slovenia

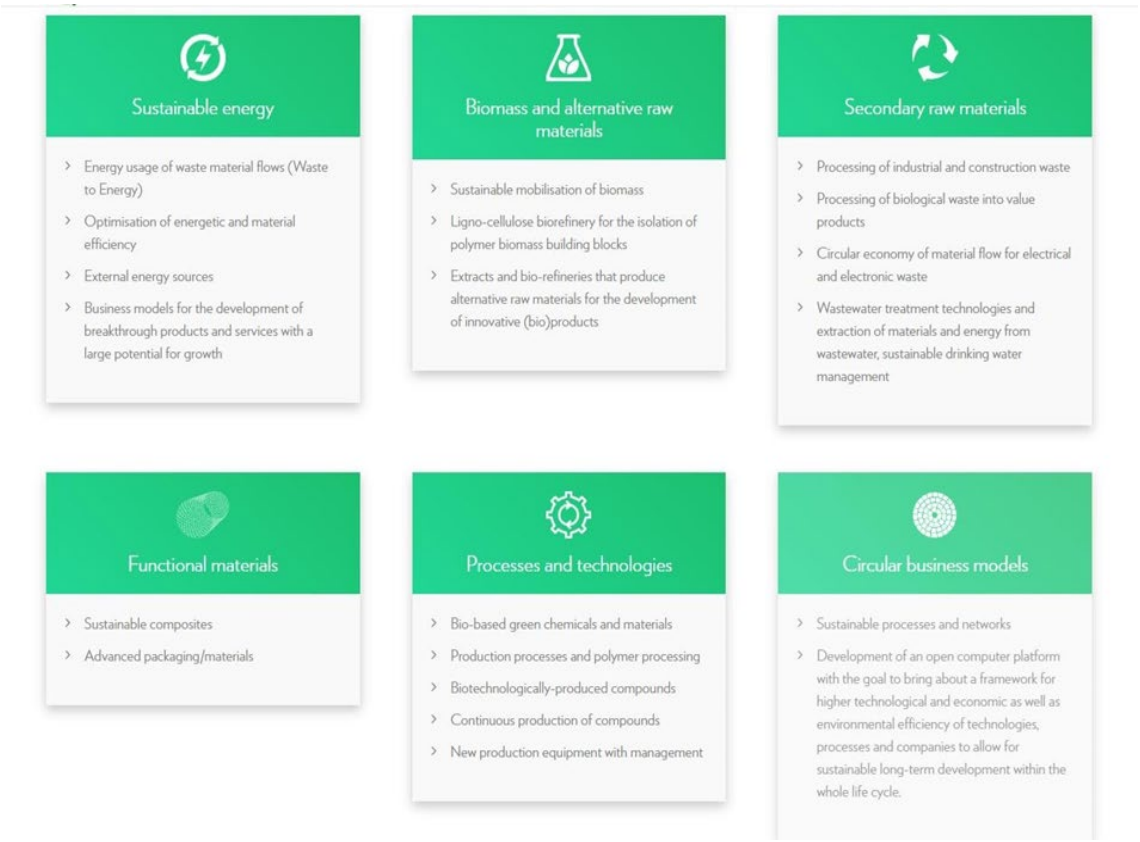
Slovenia’s plan centres around driving circularity in five main areas: forestry; built environment; manufacturing; food; and mobility.

It will focus on the three pillars of:

- Smart and circular communities,
- Circular green development;

[7] https://www.nonsoloambiente.it/greenitaly-2019-italy-invest-green-economy

- Circular policy design and science.



Examples of good practices in Slovenia

1. Reuse centres network in Slovenia

The Reuse Center (CPU) operates as a social enterprise in the reuse sector at six locations in Slovenia. In addition to full-time employees (15), it employs hard-to-employ people and provides training, which contributes to the social integration of this target group by employing a total of 35 people in the social economy network in this sector. To “reuse” is ranked second in terms of waste management priorities, i.e., before “recycling”, which gives an even more important role to such activities. EU Directive 98/2008 pays special attention to the implementation of procedures to ensure re-use. CPU has two brands, CPU Design and CPU Nostalgia, with their mission being: to use only what already exists. All materials used to make the products were identified as redundant, even as waste. CPU takes over surplus products as well as industrial surplus materials and transforms them into new, useful products through an "upcycling" process. Upcycling is the process of transforming materials intended for destruction into new products of higher value and environmental purposes.

CPU Slovenia works to promote re-use and upcycling for the purpose of improving the quality of people's lives, reducing resource consumption, reducing greenhouse gas emissions and

ecological footprint, and new employment opportunities specifically for the long-term unemployed. Their goal is to create a business opportunity in the waste sector while providing employment to vulnerable groups on the labor market.

Another strategic goal is the production of innovative products from used equipment and potential waste for the purpose of improving people's lives, especially low-income families, people with special needs, children and youth with health problems. They aim to showcase the opportunities within the Green Economy and innovative product design in circular economy.

2. Tekstina & The New Cotton Project

Tekstina presents a tradition dating back to 1928, where our story as an imperial private mechanical spinning mill began. Focussed on fulfilling the needs of the most demanding customers, we always look beyond generation to propose solutions adapted to the changing needs of our customers. In Tekstina preserving the planet and conducting sustainable operations is embedded in our more than 190-year-long tradition. Our values of persevering and respecting our natural and social environment is a key factor of our long-lasting success. The story of Tekstina is a story of constant progress, creativity and innovation oriented in new solutions that provide more comfort for our customers and less carbon impact on our planet.

Corporate and social responsibility of Tekstina in its environment has been one of the company's major ethical values since 1828. The responsibility toward its local environment extends beyond the statutory obligation to improve the quality of life for employees and their families as well as for the local community. Tekstina also works in the local area, especially through guided tours throughout the year for schools, donations to support local cultural, educational, and artistic and sports events, and co-operation with schools, universities and associations.

Tekstina sells 100% of their fabric waste from production for reuse, providing an additional source of income for the company while at the same time keeping waste material in the production loop.

The new cotton project: twelve pioneering players in the fashion and textile industries are breaking new ground by demonstrating an entirely circular model for commercial garment production. This is a world first in the fashion industry. The consortium of brands, manufacturers, suppliers, innovators and research institutes participating in the European Union-funded "New Cotton Project", will prove that circular, sustainable fashion is not only an ambition, but can be achieved today. The project also aims to act as an inspiration and steppingstone for further, even bigger circular initiatives in the industry going forward.

Tekstina is part of the project to harness fashion industry collaborations and technology to create circular fashion.

The twelve participating fashion companies and brands include Adidas and the H&M Group, alongside Finnish biotechnology group Infinited Fiber Company, Aalto University, Fashion for Good, Frankenhuis, Inovafil, Kipas Textiles, REvolve Waste, Rise, Tekstina, and Xamk.

The project, which has received 6.7 million euros in funding from the European Union's Horizon 2020 research and innovation programme, aims to not only demonstrate an entirely circular model for commercial garment production.

To demonstrate circularity in textiles, over a three-year period textile waste will be collected, sorted and regenerated into Finnish biotechnology group Infinited Fiber Company's unique, cellulose-based textile fibres. The fibres will be used to create different types of fabrics for clothing that will be designed, manufactured and sold by global brand Adidas and companies in the H&M Group, explained the project in a statement.

The initiative will also include at the end-of-use, apparel take-back programmes that will collect the clothing to determine the next phase in their lifecycle. Clothing that can no longer be worn will be returned for regeneration into new fibres, "further contributing to a circular economy in which textiles never go to waste, but are reused, recycled or regenerated into new garments instead".

3. CER – Sustainable business network Slovenia is the first and the largest partnership for sustainable economy in Slovenia.

CER is the first and largest partnership for a sustainable economy in Slovenia, which strives to achieve a climate-neutral economy as soon as possible. CER is a platform for the promotion of green transition and the use of green technologies in all sectors. It is based on the belief that the challenges of climate change and globalization require new solutions, new partnerships and new ways of working together.

CER is the messenger of that part of the economy and other organizations that believes that we must strengthen our ambitions to achieve global climate-neutral goals to which Slovenia has committed unambiguously. CER members realize that a green climate-neutral transition is no longer an alternative. It is crucial. It is mainstream.

4. BTC City: Green, they produce green energy from renewable resources

Green is one of BTC's cornerstones, along with its business unit tasked with making sure that sustainable development becomes an integral part of business practice and decision- making. As part of this mission, among other things, BTC produced 1,677,655 kWh of green energy from renewable resources in 2018 and, with efficient energy use projects, compared to the base year 2010, saved 11,147,376 kWh of energy, reduced impacts on the environment by 5,781,922 kg of carbon dioxide, and planted 13 new trees and 400 shrubs.

5. Knauf Insulation: The Urbanscape green roof system

Knauf Insulation puts its commitment to an increasingly green economy into action with projects such as the Urbanscape green roof system. This is a Slovenian innovation – a non-combustible natural growing medium that is made of virgin rock mineral fibres without any additives. Green roofs have a favourable cooling effect – they reduce overheating, store runoff, cool the structure, clean the air, reduce carbon dioxide emissions and provide a natural habitat for various organisms.

6. Petrol: More than 100 locations with chargers for electric cars

The Petrol group has been actively increasing its energy independence and efficiency, along with the share of renewable energy sources in the markets where it operates. In the long term, it aims to create a green energy mix, including options for sustainable mobility. In Slovenia it has established a network of public e-chargers at more than 100 locations, which are used by more than 90% of all electric car drivers in Slovenia. Petrol's sustainable focus is also present in towns – in terms of energy and the management of all natural resources.

7. Slovenia: EIB provides €50 million to SID Banka for the green and sustainable development of municipalities

The European Investment Bank (EIB), the bank of the European Union, will provide €50 million to Slovenska izvozna in razvojna banka (SID Banka) to create a new source of more affordable financing for investments in small infrastructure projects promoted by Slovenian municipalities. SID Banka will match the EIB investment with own funds, unlocking a total of €100 million for investments in municipal development in Slovenia.

Local governments and their public companies will be able to finance small-scale infrastructure projects, energy efficiency measures and environmental protection initiatives in their local communities.

The operation accelerates the green and sustainable development of Slovenia, improves the quality of life and the conditions for doing business in the country, and strengthens economic, social and territorial cohesion in the European Union. Slovenian municipalities will be able to invest in reducing their energy consumption, energy waste and carbon footprint, contributing to the success of global climate action and EU plans to become carbon neutral by 2050.

8. Eco-schools in Slovenia

In Slovenia, the number of educational institutions included in the Eco school program constantly grows. 722 institutions registered as an eco-school in the school year 2018/19. This present 35 % of all schools, including kindergartens in Slovenia.

Thus, more than 130,000 children and 8,500 teachers were engaged in the environmental projects as part of the environmental education. Internationally, the eco-school program includes more than 50,000 institutions of which 17,000 already signed for a green flag. Looking globally, more than 21 million of children, more than 1.2 million teachers and more than 7,000 local communities cooperated in the program.

FROM GREEN THINKING TO GREEN ENTREPRENEURSHIP3 RAISING AWARENESS OF A GREEN BUSINESS

In this section, we will see how some countries raise awareness of green businesses and encourage green entrepreneurship.

Portugal

Widely discussed over the last few years in Portugal, and beyond, entrepreneurship is understood by many as something associated with the creation of a small business that, when injected with capital, manages to scale the sale of its good or service, generating a growth in the sales volume greater than 20% per year. However, this view can be reductive. According to the OECD, entrepreneurs are "(…) agents of change and growth in a market economy, being able to act to accelerate the generation, diffusion and realization of innovative ideas (…), seeking not only to identify potentially profitable economic opportunities, but also being willing to also to take risks in relation to the intuition they have in the face of this potential opportunity".

As Portugal is one of the biodiversity hotspots in the European Union, it naturally has a strong potential for the development of new businesses in which environmental protection is the core of the business model. However, an explicit link between entrepreneurship and sustainability has not been made in the country, neither within the scope of public policies, nor at the level of the various existing venture capitalists. In other words, in the various initiatives to promote entrepreneurship, environmental, social and ethical issues as explicit criteria that are required by investors are not visible. The potential of the green economy is already recognized and quantifiable in some countries, with several governments working on this issue, since the absence of a "green economy" will result in significant economic problems in 10 years. or 15 years and, as such, it is necessary to anticipate and act.

It is also necessary to have venture capital to invest, for example, in the export of organic wine, in the production of organic agriculture, in the prototyping of equipment and products that can contribute to greater efficiency in the use of resources, in sustainable tourism, among many others. In other words, it is essential for the venture capital world to realize what the OECD has long understood: "green" entrepreneurs can identify new emerging market niches, which may result in changes in social values, consumption patterns or reforms in the legislative framework.

Another important aspect for venture capitalists is to understand that there is a growing number of entrepreneurs who want to develop sustainable businesses, in which they are able to develop and exploit entrepreneurial opportunities that create economic, ecological and social value, and

where the pure financial maximization of short-term project is neither the main nor the only concern.

This is not philanthropy, but investing responsibly and thinking about the well-being of our children and grandchildren. This is what being a sustainable investor is all about.

Malta

In 2019, the Maltese Government embarked on a process to mainstream sustainable development principles within the budget process. As part of European Week for Waste Reduction a business breakfast on the theme 'Make it your business not to waste' on how local businesses can reduce waste was held by the Ministry for the Environment at a hotel in St Julian's.

Waste expert Mario Schembri from AIS Environment consultancy and Wasteserv chairman David Borg spoke about how being proactive about waste is the way forward. Other speakers included Charlene Mercieca from Soap Café, Victor Galea from VG Tiles and Selina Zerafa from Malta Freeport.

Environment Minister José Herrera said the government was planning to introduce environmental measures and initiatives. These included a nationwide organic bag collection, the implementation of the Beverage Container Refund Scheme, the setting up of a waste- to-energy facility by 2023, increased enforcement and other measures a legal nature.

But he said that "to effectively reach our targets we need the active participation from all industry players as well as from all private citizens", adding the government was committed to strengthening efforts related to environmental educational campaigns.

We can truly embark on achieving a greening transition for our economy. This is because today we can realistically achieve our environmental objectives while simultaneously delivering better economic growth and more sustainable profits for our enterprises.

Such an eco-entrepreneurial mindset has a real potential to enhance bottom-line earnings for Maltese enterprises. This can be achieved both via a new stream of the virtually untapped source of green revenues and through significant cost reductions resulting from efficiency gains in existent operations.

It is encouraging to see many Maltese entrepreneurs diversifying their energy mix into renewables. This is proving to be pivotal for efficiency and bottom-line earnings. However,

greening-related cost reductions can go way further. Sustainable product design and packaging is a specific area which can deliver significant cost benefits without jeopardizing the value of the final product.

Italy

Renewable energy, electric and sustainable mobility, recycling and saving energy: Italian interest in sustainability is growing, but we still have a long way to go to reach the levels of awareness of citizens and companies.

Italian consumers are assigning more importance to environmental protection and choose to purchase from companies that integrate environmental and social sustainability in their business models.

According to a study carried out by Istituto Piepoli, a leader in marketing and opinion research, 63% and 64% of subjects consider it important for companies to pay attention to the reducing polluting emissions and greenhouse gases, respectively, and 62% of them reacted favorably to the responsible management of waste through reuse and proper disposal.

Just over half of those interviewed favor the conscious and responsible consumption of energy, natural resources and water, as well as the protection of biodiversity, plants and animals and the ecosystems where they live. But there is an equally important segment of people who are not sufficiently informed on the importance of renewables in boosting the energy transition and decarbonization.

According to the survey, less than half of respondents said it was important for companies to pay attention to the needs and expectations of customers, to dialogue and share their sustainability goals with the local community, to promote the educational development of the community and the creation of Smart Cities, an urban model on a human scale, through the development of infrastructure, services and cutting-edge technologies.

Many companies have already incorporated renewable energy into their corporate and production processes and some of them have taken sustainability efforts to the next level, including a sticker indicating that a product is green, or produced 100% with renewable energy, on some products (i.e., cookies)[8].

[8] https://www.enelgreenpower.com/stories/articles/2019/07/sustainability-survey-italians

According to the Report on SDGs in Italy 2021 the situation in Italy is stable. There has been an improvement in terms of pollution and public services, but also a worsening due to public transport, illegal building and overpopulation also due to the pandemic. There has also been an improvement in the use of resources and in separate waste collection, although there has been an increase in rubbish production per capita. Regarding greenhouse gas emissions, a clear improvement was perceived, especially in 2020, although due to the pandemic stop. With regard to fishing, an increasing improvement was also seen in terms of a decrease in intensive fishing, thus allowing for good fish growth. Bad news, however, from the point of view of land use, which has seen a deterioration in recent years.

Spain

One of the lessons we have learned from the crisis caused by the coronavirus is that we need to rethink our entire production system. In the next ten years we will have to give more prominence to digitization, innovation and environmental sustainability, if we do not want to be left behind. But this transition to a green economy will also mean the introduction of numerous changes that will have an enormous impact on the world of work, on a scale equivalent to that of an industrial revolution.

In some sectors jobs will be created and in others they will be destroyed. The International Labor Organization forecasts that approximately six million jobs will be lost in the next decade. But it also calculates that, as we move towards a more circular economy, some 24 million new jobs will be created around the world in professions linked to sustainability and the environment. That is, for every job lost, four new jobs will be created. What are those business areas that are going to be further developed? In which sectors will there be more work?

Yesterday the “Employment in Sustainability and Environment Report” was presented. 10 professions with a future”, prepared by Infoempleo in collaboration with UNIR, which provides relevant data to know what the employment situation is in terms of sustainability and the environment in our country, what challenges we face to achieve that green economy towards which we must move , and what will be the most demanded areas and profiles in this field.

Within the study, which was released at the Conference on Sustainability and the Environment organized by UNIR, a group of experts in sustainability and the environment with extensive experience and recognition in the sector, they analyze the situation in which we find ourselves, what role are companies playing in this transition towards a greener economy, and how has the health crisis affected the objectives set, among other issues.

The Report also provides an in-depth analysis of ten profiles in this area that will have significant labor demand in the future through professionals with extensive experience in these positions. Ten professionals who relate, from their experience, what these professions consist of, what future prospects they have and the training necessary to access them.

Green economy and digitization to recover from COVID-19

One of the most widespread conclusions about the impact of the pandemic in Spain is the need to rethink the production model, leaving behind an economy focused on tourism and the service sector, to give prominence to industry, digitization, innovation and environmental sustainability, more resistant to a situation like the current one. However, this change in the production model faces several basic difficulties in our country, such as: the high unemployment rate, the lack of research and innovation, and the increasingly secondary role of industry in the Spanish economy, with less weight in GDP than the European average.

The "Recovery, Transformation and Resilience Plan" presented by the Government, and which President Pedro Sánchez again defended yesterday at the World Economic Forum in Davos, is in line with the Agenda for Change, the 2030 Agenda and the Development Goals United Nations Sustainable. Over the next three years, this plan will mobilize 50% of the financing that Europe will provide us (72,000 million euros between 2021 and 2023, and 140,000 million in total over the next six years) through the Next Generation EU Plan, the European recovery. 37% of the total Plan will be allocated to "green" investment and 33% to digitalization of companies.

It is estimated that Spain can generate 1.13 million green jobs if the right investments are made in renewable energy, sustainable transport and green infrastructure. Some 600,000 additional jobs could also be generated in the next ten years, related to sustainable forest management (280,000 jobs), extensive agriculture and livestock (150,000 jobs), and the circular economy, which could create up to 160,000 new jobs.

Seven areas that will be key to job creation

Some of the profiles that are analyzed in the Report on Employment in Sustainability and the Environment prepared by Infoempleo and UNIR are in the areas that are going to serve as an impetus for this transformation that we will live in the next decade, others belong to emerging niches of the circular economy or sustainability, or to areas that are expanding their radius of action. These are the areas in which a significant demand for professionals is expected:

1. Sustainable innovation

As cited in the Report, a large part of the transition towards a more sustainable world will depend on whether we manage to develop an innovation ecosystem that allows us to create the best technological alternatives in each sector. Currently, the number of people dedicated to research and innovation in Spain in the business field (231,413 employees) is still lower than the European average, although in 2019 it experienced a significant increase, exceeding the levels prior to the economic crisis for the first time. Expenditure on internal R&D amounted to 15,572 million euros in 2019, 1.25% of the Gross Domestic Product (GDP). The goal is to reach 2% of GDP.

2. Environmental Protection

The broad and complex regulatory framework that companies must comply with on pollution prevention and control has prompted the need for specialized advisors in different subjects and specialties (environmental legislation, environmental engineering, environmental sustainability, circular economy, risk prevention, etc.). quality systems, corporate social responsibility…). It is estimated that services related to environmental management in industries and companies generate some 26,354 jobs in our country, which comes to represent 5% of the total employment created by the green economy in Spain.

3. Waste management

The management and treatment of waste will be another of the employment niches in this area. According to calculations made by the European Commission, if all current regulations on waste are applied, in the coming years more than 400,000 jobs will be created in the European Union, of which 52,000 would be located in Spain.

4. Renewable energy

The job offer in renewable energies has been growing in recent years, especially with regard to technical profiles. According to the objectives set by the Government for the coming years, in Spain net employment in the renewable energy sector will increase between 250,000 and 350,000 people from 2021 to 2030. Investments in renewables would generate between 107,000 and 135,000 jobs; those dedicated to energy saving and efficiency, between 56,000 and 100,000 jobs; and those of networks and electrification of the economy, about 46,000. Likewise, it is expected that the energy change will also generate up to 118,000 indirect jobs.

5. Sustainable logistics

Around 70% of the world's population is expected to live and work in large urban areas by 2050. This will cause cities to face a series of growing problems in terms of the use of different infrastructures. Logistics will play a key role in making cities more sustainable. The rise of electronic commerce (and the impact that its deliveries generate), and the current dependence on fossil fuels in transport, will require innovative solutions, in turn allowing the appearance of a wide variety of job opportunities related to planning and management. of sustainable transport, which is estimated at 210,000 new jobs.

6. Ecodesign

According to data from the European Commission, up to 80% of the environmental impact that a product will have is determined in the design phase. Making products that are more durable, and that can be easily repaired and recycled, is one of the main challenges of the 21st century. This transition towards a more sustainable economic system is a key element in the EU's industrial strategy. It is estimated that up to 700,000 jobs linked to the circular economy can be created in the next ten years.

7. Environmental education

The opinion of the experts gathered at the Congress on Sustainability and the Environment, where the Report on Employment in this sector was released, was unanimous: the transition towards a green economy and a more sustainable world cannot be effective without the involvement of All society. And for this it is necessary to educate companies, and citizens in general.

The environmental education and information sector represents 1.5% of total environmental employment in Spain (7,871 jobs). As in other sectors, work in environmental education and information activities has also undergone a notable evolution in recent years. The professionalization of this subsector is a reflection of this evolution.

Turkey

According The World Bank Turkey Green Finance Report: Green finance is financing for investments that provide environmental benefits and contribute to climate action by financing projects that lead to reducing greenhouse gas (GHG) emissions (mitigation) and support adaptation to changing climate.

International development organizations list several criteria to define green projects. Often, agencies promoting "green projects" define the eligibility criteria for activities and use of resources based on their own polices and overarching principles. The Green Bond Principles of the International Capital Market Association and the Green Loan Principles of the Loan Market Association both outline indicative lists of eligible Green Project categories.

The European Union's Taxonomy: Final report of the Technical Expert Group on Sustainable Finance published in March 2020 is the most comprehensive initiative at the moment in relation to identifying and labeling green/sustainable activities, and may form the basis for broad green labeling standards in the near future. Developing this initiative further, in April 2021 the European Commission adopted a package of measures that includes directives on EU Taxonomy, corporate sustainability reporting, sustainability preferences and fiduciary duties.

The Green Finance Committee under the China Society for Finance & Banking developed a Project Catalogue with comprehensive guidelines on what constitutes green projects in the Chinese green bond market. MDBs such as the World Bank and EBRD also have their criteria for green projects. Broadly, categories of eligible green projects are defined by the problems they aim to tackle, including climate change (both adaptation and mitigation), natural resources depletion, loss of biodiversity, and air, water, or soil pollution.

Examples of World Bank Green Bond Projects include:

Eligible mitigation projects that meet specific criteria for low-carbon development:

- Solar and wind installations;
- Funding for innovative technologies that allow significant reductions in greenhouse gas (GHG) emissions;
- Greater efficiency in transportation, including fuel switching and mass transport;
- Waste management (methane emissions) and construction of energy-efficient buildings;
- Carbon reduction through reforestation and avoided deforestation;
- Protection against flooding (including reforestation and watershed management);
- Food security improvement and implementing stress-resilient agricultural systems (which slow down deforestation);
- Sustainable forest management and avoided deforestation;
- Transitioning Organized Industrial Zones to eco-industrial parks (Green OIZs).

Areas of EBRD Green Portfolio Projects include:

- Renewable energy projects, such as photovoltaic installations, and production of photovoltaic cells/modules, installation of wind turbines, construction of mini-hydro cascades, geothermal and biomass facilities;
- Rehabilitation of power and heating plants and transmission/distribution facilities to reduce total greenhouse gas emissions;
- Modernization of industrial installations to reduce total GHG emissions;
- Innovative technologies that result in significant reductions in total GHG emissions (i.e., smart distribution networks);
- Fuel-switching from carbon-intensive (coal, heating oil, oil shale) to less carbon- intensive fuels such as natural gas;
- Greater efficiency in mass transportation, such as investment in fuel-efficiency (fleet replacement), or more energy- efficient infrastructure;
- Methane capture on waste landfills and wastewater treatment plants;
- Rehabilitation of municipal water/wastewater infrastructure to reduce water consumption and wastewater discharges;
- Improvements to solid waste management (minimization, collection, recycling, storage, and disposal);
- Energy efficiency investments in existing buildings (insulation, lighting, heating/cooling systems);
- Investments to improve efficiency of industrial water use;
- Sustainable and stress-resilient agriculture, including investments in water efficient irrigation;
- Sustainable forest management, reforestation, watershed management, and the prevention of deforestation and soil erosion.

World Bank Green Bond Projects do not include hydropower projects due to their large impacts on the environment, livelihoods, and ecosystems, and EBRD green portfolio projects only include the construction of mini-hydro cascades. Hydropower rehabilitation projects are considered green if they increase energy efficiency and dam safety.

Grow greener in Turkey

Realizing that the impressive growth since 2000 has put pressure on natural resources and the environment, Turkey has made efforts to decouple its growth from air emissions, waste generation and energy and water consumption. Production-based CO2 over GDP decreased from

0.2kg/USD in 2005 to 0.18kg/USD in 2015. Emissions of all pollutants from road transport have declined, except for SOx. Emissions of carbon monoxide and PM10 from power stations and industrial combustion have also decreased.

Progress has also been made in the expansion of waste treatment infrastructure, including sorting, recycling and medical waste treatment, and annual per capita municipal waste generation has declined by 8% over 2005 and 2016. Water supply and sanitation service have also improved with the increasing share of the population with access to municipal drinking water (2%) and sewage system (16%) over 2001 and 2014. (OECD Environmental Performance Review in Turkey, 2019)

The share of protected areas has also increased in 2020 amounting to 10% of the country's surface area in 2020 in an important step towards achieving OECD standards (17%).

Turkey's successful zero waste initiative

The Zero Waste policy went into effect at various government ministries over the course of 2017, later spreading to the municipalities and a number of private companies and specific public institutions, including schools and hospitals. Turkey has saved tons of plastic and made its steas cleaner, with thousands of buildings, residencies and companies having implemented recycling into their waste disposal policies.

Following the flagship Zero Waste initiative, launched in 2019, thousands of buildings, residences and companies have implemented recycling programs and over 57,000 tons of waste has been removed from the country's seas.

The ''zero waste management system'' in Turkey aims to protect the environment and human health by establishing and developing management processes in line with the principles of sustainable development with effective management of materials and natural resources. The Zero Waste Regulation, prepared on the basis of Environmental Law No. 2872 and published in the Official Gazette dated July 12, 2019, regulates the principles and procedures of the zero-waste management system to be established in many enterprises and industrial plants, as well as local administrations and public institutions.

Zero Waste Blue, the project's maritime wing, also proved effective in mobilizing the public to keep the country's four seas and other bodies of water clean. More than 163,000 cubic meters of waste have been removed from the seas since the Zero Waste Blue was launched early in 2019. More than 30,000 people have been educated and trained on how to prevent and handle

maritime pollution, while 760 companies have declared their commitment not to dispose of waste in the seas. Associations of divers are also contributing to the Zero Waste Blue program, holding public events to collect waste from the seas.

Aside from the environmental benefits, the project looks to save the country around US$300 million annually and create jobs for 150,000 people by 2023, according to projections. The country seeks to increase its recycling rate from 13% to 35%. Education is a key element to achieving this aim, and so, since its inception, the Zero Waste program has boosted media recognition of the issue and promoted awareness at schools in order to combat the culture of haphazard use of disposable materials and food waste. Today, containers separating paper, metal and glass waste are a common sight in Turkey.

The Ministry of Environment and Urbanization has implemented a zero-waste project at its premises, whereby waste is collected separately, food leftovers are sent to animal shelters, and compost units are installed to produce manure. Thanks to this project, waste from the ministry's premises is no longer sent to landfills. The Government is organizing nationwide awareness campaigns and aims to expand the zero-waste project to all public institutions and public spaces by 2023.

Romania

The European Green Pact is the European Union's enlargement strategy, the main goal of which is to make Europe the first climate-neutral continent by 2050, so that no more greenhouse gases are emitted, and sustainable economic growth can be achieved. it is no longer based on the use of resources, and change is made unilaterally, without any state being left behind.

The plan was proposed by the European Commission in 2019 and pursues a number of concrete objectives in various sectors such as biodiversity, energy, transport, construction and the food industry. Areas of action in which the pact has an effect are investment in clean energy, support for sustainable industry, improving energy efficiency in construction and renovations, "from farm to consumer" (food sustainability, support for farmers and organic fishermen), support for agriculture pollution elimination, sustainable mobility and clean transport, climate policies, and biodiversity.

According to the European Commission's website, the European Union will provide financial and technical support to all states in need of assistance to move to the green economy, using the "Fair

Transition Mechanism", which will contribute at least 100 billion in the period 2021-2027, in the neediest regions.

However, according to the Paris Agreement, which regulates measures to reduce carbon dioxide emissions to ensure that the global average temperature does not rise by more than 2 degrees, the program imposed by the European Commission which provides for the reduction of emissions 40% greenhouse gas by 2030 is not enough to slow down the effects of global warming. According to a report by the United Nations Environment Program in 2020, reaching the 1.5-degree temperature target of the Paris Agreement requires reducing global emissions by 57% - well above the Commission's initial 40% target. And, of course, better-developed economies are expected to contribute significantly more than those of developing countries.

In September 2020, the European Commission decided to update the pact in a more ambitious way, with a proposal to raise the emission reduction target from 40% to 55%, also with a detailed action plan and an analysis of the impact that "prepares the ground" for adapting European environment and energy policies. The Commission has also proposed an Environmental Law that would introduce the climate neutrality target by 2050 into European law.

In short, measures are being taken at European level in the fight against global warming, and these measures are becoming more and more ambitious as the margin of error becomes smaller, but what is Romania's role? Or, rather, what is Romania doing in the European context to help this collective effort?

Under European law, each Member State has submitted a proposal for a National Energy and Climate Plan outlining what actions that state will take in the next 10 years, more specifically here in the period 2021-2030, to achieve its national reduction targets. of gas emissions. The plan is in turn analyzed by the European Commission and presented with suggestions for improving the final plan.

The Romanian state's proposal aims at a holistic approach to the dimensions of the Green Pact and is especially focused on the clean energy strategy for the period 2021-2030. Romania will be able to achieve its goal of reducing greenhouse gas emissions if it implements policies in line with the proposed projections, especially in the transport, agriculture and possibly construction sectors. The areas in which the state must, according to the Commission, impose more ambitious targets and actions are the contribution of renewable energy, energy efficiency and security of energy supply. Also, air quality and the transition to clean energy in a socially correct way are issues that will need more attention.

The proposal also outlines the needs of the Romanian state in terms of investments in the transition to clean energy. The strategy is estimated to cost a total of around € 127 billion over the period 2021-2030 (around 6% of GDP annually), mostly in the energy supply sector.

The proposed regional cooperation is mainly focused on the energy security and internal market sectors, with a high potential for expanding cooperation in these areas.

A possible good practice is the proposal of the Romanian state to create an investment fund for energy efficiency, from public, private and European funds, to finance technologies and decarbonization processes, as well as energy efficiency and renewable energy projects. Depending on how it is implemented, such a fund could be an effective way to pool resources and drive the necessary investments in these sectors.

In March 2020, the then Minister of Economy, Virgil Popescu, stated that “achieving these objectives involves transforming the Energy System, which must be achieved on clean technologies, based on competitive mechanisms. These transformations involve significant investments in production, smart grids and so on, as well as new market models based on new energy capabilities and innovation. We need to see new ways to capitalize on natural gas to support the integration and transition process. The Fair Transition Fund is a tool that will help us get through this process well.”

An example provided by the former Minister for Intergovernmental Cooperation for Energy Supply and Refurbishment is the cooperation agreement between Romania and the USA regarding the Cernavoda power plant.

Overall, we are still at the beginning of the European Green Pact. It is a project that will last for three decades, so it is no wonder that now we only see the so-called "office work". But this legislative basis will dictate the functioning of the entire European space in the coming years, from the distribution of European funds to the implementation of environmental measures to the recycling methods used in the Member States.

Environmental investments in Romania

Objectives

- Continuation of projects launched in previous years and start of other sectoral programs;
- Efficient use of non-reimbursable external financial resources in the field of environmental protection and gas reduction with effect greenhouse;
- Stimulating the purchase of low-polluting equipment and vehicles.

Funding sources

Mainly, environmental policies are supported by projects funded by European grants and the Environment Fund budget, to which other European financial instruments will be added in the coming years.

The portfolio of projects that will take place in the period 2021-2027 is composed both of projects already in implementation, which have proven their effectiveness, and of new projects, postponed in implementation in previous years, as follows:

- Continuation of Rabla and Rabla Plus programs. The two programs benefit from a cumulative financial allocation in 2020 of 540 million of lei, contributing both to the reduction of transport emissions and to the relaunch of the Romanian car industry;
- Continuation of the development program for the recharging infrastructure of electric vehicles in Romania, both in localities and at the level of highways, national roads and European. He benefits from an allocation financial accumulated in 2020 of approximately 268 million lei;
- Continuation of development programs for "green" transport by financing electric buses/gnc in municipalities and localities.
- The launch of a new session in 2020 benefits from a cumulative financial allocation of approximately 930 million lei;
- Launch programs to increase energy efficiency in public and private buildings in 2020, with a cumulative financial allocation of approximately 813 million lei;
- Launching the program to increase energy efficiency in public street lighting in 2020, with a financial allocation of approximately 384 million lei;
- Implement the emission reduction program by increasing energy efficiency in centralized thermal energy power supply systems of the localities. The program will benefit from a financial allocation in 2020 of 100 million lei, out of a total of 400 million lei representing the contribution from the Environmental Fund;
- Implement the program to increase energy efficiency in energy production complexes. The program benefits of a financial allocation in 2020 of 628 million lei;
- Starting the program to reduce emissions by afforesting land in 2020, with a budget of 59 million lei;

- Start the program to increase energy efficiency by replacing used electrical and electronic equipment with some more efficient in terms of consumption. The program starts in 2020 and benefits from a financial allocation in 2020 of 30 million lei;
- The financing program for the installation of photovoltaic panels for both households connected to the electricity network and for isolated ones;
- Continuation of the development program of the water supply infrastructure, sewerage and treatment plants in the localities. The program receives a financial allocation in the year 2020 of 40 million lei.