The European Green Deal

WHAT IS IT?

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Content

Introduction

Climate change is one of the most burning issues for young people today, but information on measures adopted by institutions like the European Union is not easily accessible to them. Not because they are not public, but because their language and formats are not adapted to young people's reality.

The *European Green Deal* is the main European initiative to tackle climate change, but it is not easy to understand its content and development. With this document and the UPin project, we aim to make the EU Green Deal understandable, accessible and engaging for young people. Understandable in this case means not only language, but understanding in context and with the starting points, modes of action and impacts. Since climate change is a complex problem, its solutions are also correspondingly complex. We want to raise awareness of climate change among young people, inform them about solutions on different levels and empower them to become active in the fight against climate change.

The following pages explain what the European Green Deal is and the actions the European institutions are implementing on eight different topics: energy, buildings, mobility, agriculture, ecosystems & biodiversity, pollution, research & innovation, and the fair transition. Each chapter introduces the relevance of the topic regarding climate change, the measures adopted in the frame of the European Green Deal and the impact they will have on citizens' lives, with a special focus on young people's lives. The main concepts related to each topic are explained in a glossary.

We hope that after reading this publication you will be able to answer the question that gives it its title: "What is the European Green Deal?".

1. The European Green Deal

Is it really such a big deal?

Climate change is a fact. Every day it becomes more evident that a deep, radical change is needed to stop it. These transformations need to be adopted in very different fields so that they really make a difference.

That is the goal of the European Green Deal. In December 2019, the European Commission presented a strategy that aims to transform Europe into the first climate-neutral continent[1] by 2050 and called it the *European Green Deal.* It sets several guidelines to transform the European Union into a more environmentally friendly territory. The Commission aims that in 2050 all the CO2 emissions will be balanced by different means to be equal to zero.

But how important is really this Green Deal?

It is not a “simple” European strategy to combat climate change. It made environmental protection a core topic of current and future policies of the European Union. From now on, European decisions must consider the environment and its preservation. It also aims to protect the health and well-being of European citizens while facing climate change's threat.

On the other hand, this document sets a very ambitious objective. It established a 30-year deadline to end greenhouse gas emissions in the European Union. With this, the Commission wants the EU to be the first climate-neutral continent. In other words, by 2050 all the CO2 emissions would be compensated to zero (0). This means that European institutions, member states, companies and citizens need to implement significant changes to take a huge step forward in fighting climate change and reduce their greenhouse gas emissions.

So, pretty huge, isn’t it?

One goal, eight focus areas

The EU Green Deal works like a big umbrella that covers different fields. It lays in multiple tools to achieve its objectives. If we really want its objectives to become a reality, we need to implement many changes. Moreover, we cannot focus just on one matter: we need to address different topics to make a real change. Some of them might not seem to have a direct relationship with climate change, but they do have strong links with it and all of them need to be addressed.

[1] Becoming the first climate-neutral continent by 2050 is the official slogan of the EU Green Deal. At this point, we would like to emphasize that this is a program of the European Union - that includes some, but not all, countries on the European continent. Therefore, "European" in this document always refers to the European Union and not to the European continent as a geographical entity.

The Green Deal sets two main action fields:

- Transformative policies in eight sectors
- Making sustainability a common thread among all the European policies (or, as the Commission says: "Mainstreaming sustainability")

What do you think are these areas or fields of climate action?

Make a list of the topics that, in your opinion, need to be addressed to make our lives more environmentally friendly.

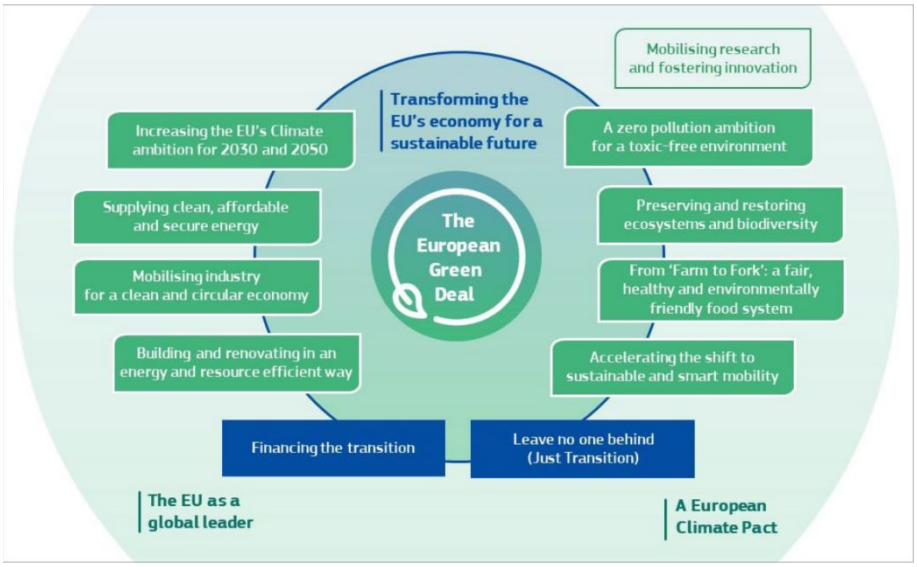
TRANSFORMATIVE POLICIES

The EU Green Deal focuses on eight fields:

1. Climate
2. Energy
3. Industry & the circular economy
4. Buildings and their renovation
5. Pollution
6. Ecosystems and biodiversity
7. Agriculture & the food system
8. Mobility

It sets different objectives for each of them, defining how the road towards a zero-emissions Europe should be. It highlights the current environmental issues from each topic and introduces an alternative scenario.

This approach is essential to achieve the deep transformation the Commission wants. These fields are related in different ways and all of them have an impact on the climate. That is why it is necessary to address them in parallel. If changes are implemented just in one field, the impact will not be as transformative as needed.



The European Green Deal, European Commission, 2019

MAINSTREAMING SUSTAINABILITY

Besides identifying these essential areas for combatting climate change, the Green Deal also introduces a new trend. From now on, sustainability and the environment must be considered in all the activities carried out by the EU. This means that areas as different as finance and investment, national budgets, research or education will need to pay attention to climate change.

Research and scientific innovation will play a central role in this transformation. The EU needs new technologies and developments to make the Green Deal's goal come true. If our current way of life is damaging the environment, we need a new one, right?

The new measures originated by this Deal will also address the differences between countries and citizens. Some regions and sectors will face more challenges during this process. They may be more dependent on non-renewable energy sources or have fewer resources to implement changes, for instance. To avoid inequalities, the green transition will consider these differences. It will be implemented in a way that leaves no one behind. “This transition must be just and inclusive”, claims the EU Green Deal.

Turning words into action

The European Commission has established its green objectives with the Green Deal, but where are we now? Transforming them into reality will take different steps. Also, to achieve this huge change, the European Union cannot work alone. Member states need to collaborate and adapt their policies to be aligned with the new strategy.

Once the European Commission introduced common objectives for the whole territory, the Union’s mechanism started to work. The Green Deal’s roadmap is being developed by different instruments that are turning words into action.

By these means, different actors are involved in the process. The European institutions are bounded to the green goals, but also member states and their national, regional and local institutions, citizens and companies. This top-to-the-bottom process ensures that the whole EU community is aligned with the Green Deal and that its objectives are achieved.

But not only the states or institutions: citizens are also involved in this process. The Commission has different channels to hear civil society’s ideas and concerns regarding the climate transition: the European Climate Pact and the New European Bauhaus initiatives. These initiatives are platforms where civil society and policy-makers met to exchange ideas and take action to ensure a deep social change.

The European institutions use different tools to guide these actions, like:

Specific strategies: they set more concrete objectives for each topic

Regulation and standardisation: they create new laws and rules that ensure that actions are taken.

Investments: the European Union funds projects and initiatives to achieve the new objectives.

National reforms: member states need to change their laws or policies to follow the EU’s directions. Reforms may also be necessary at regional and local levels.

Of course, to make a real difference, a big change in the global sphere is needed. The EU wants also to influence other countries and regions to achieve a global transition towards a more sustainable world.

THE CLIMATE LAW: FROM PROMISES TO LEGAL OBLIGATIONS

To be sure that the Green Deal's ambition is not put aside, European institutions adopted in 2021 the **European Climate Law**. This new law made the climate-neutrality objective binding for the Union and the member states. With the Climate Law, there are no more excuses: the European Union must transform itself into a zero-emissions continent.

But what is then the difference between the Green Deal and the Climate Law?

The Green Deal is a plan, a strategy from the European Commission. It compiles the objectives set by the Commission, but is not a legal document: no one is really obliged to meet those goals.

And this is exactly the difference from the Climate Law. As a law, it turns the zero emissions goal into a mandatory task.

The same happens with the concrete objectives for the topics we will see in the next chapters. The Green Deal shows the direction and then the European Institutions develop or update strategies and laws to ensure that decisions are implemented.

Check this **infographic** to better understand how the EU turns its goals into laws.

Moreover, it introduced a mid-term objective: to reduce greenhouse gas emissions by at least 55% by 2030, compared to 1990 levels. The Union is already working towards achieving it. The European Commission has presented the "Fit for 55" package, a set of proposals to revise existing legal European documents to align them with that mid-term objective.

Besides reducing our impact on the environment, our society needs also to be able to adapt itself to the changes that are currently happening in the climate. To cope with these "unavoidable impacts" of climate change, the European Union has developed the *EU Adaptation Strategy*. Its aim is, on one hand, to be able to anticipate and reduce risks and, on the other hand, to be more flexible in adapting our life and activity to those impacts. This ability is also known as "climate resilience".

Good for the planet, good for us

As an initiative planned to fight climate change, it is easy to identify its first benefit: a healthier environment; fresher, less polluted air; cleaner water and more biodiversity.

It will also bring wider advantages linked to the eight topics of the Green Deal: environmentally friendly energy, new and more efficient buildings, healthier and more affordable food, more and better public transport, longer-lasting products, a stronger industry sector, and new jobs and skills.

Our society and economy will also be better prepared to face extreme climate events, reducing their impacts on our lives. All this means that we will need to change harmful habits. Citizens, companies and institutions will have to adapt to the new realities.

In the following chapters, we will go deeper into some of the transformations the European Green Deal aims for and the impact they will have in our daily lives.

The next chapters are focused on the following topics:

- Energy
- Buildings
- Mobility
- Agriculture & the food system
- Ecosystems, biodiversity & the circular economy
- Pollution
- Research & Innovation
- The fair transition

Think about the current environmental problems related to these topics and possible solutions.

2. Energy

Could you live without energy?

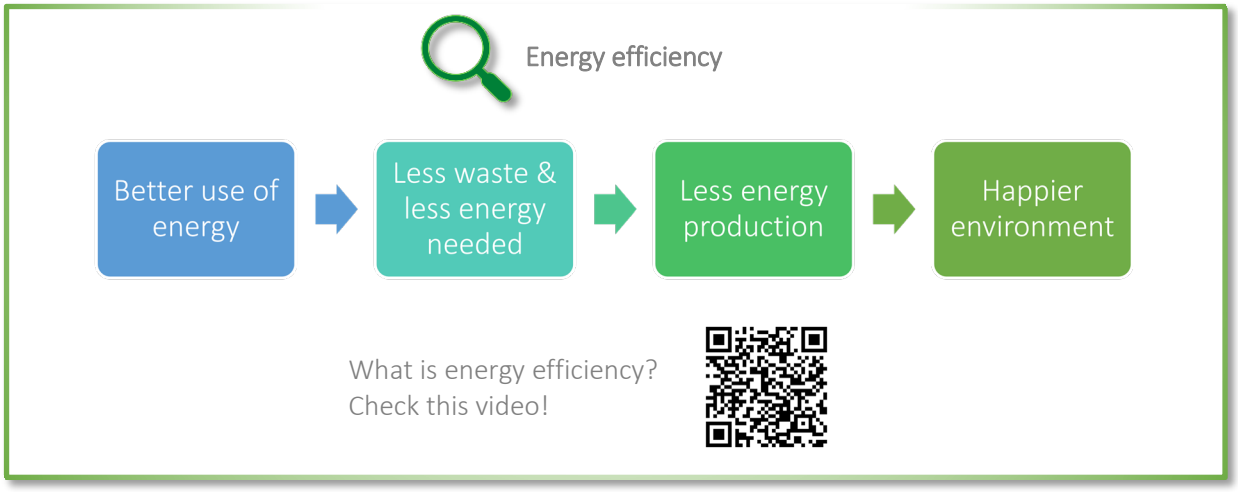
Have you ever reflected on how much energy you use on an average day?

Think of it: since you wake up till you go to bed, how many activities need an external energy source? Let's see some of them:

- Using electronic devices like smartphones, laptops, tablets… You need electricity to charge them, don't you?
- Internet: would it work with no electricity?
- Lights: more electricity!
- Hot shower: how is the water heated? Yes, energy.
- Do you cool or heat your room depending on the weather? Then, add more energy consumption to your list.
- Do you go to school by car or public transport? Yeah, you know what to do… Add this too.

Our lifestyle definitely needs big amounts of energy. Did you know that producing and using energy is one of the most polluting activities? More than 75% EU's greenhouse gas emissions come from it[2]. If we want to maintain our living standards and take care of the climate, we need to find new, more environmentally friendly ways to produce energy.

Also, if we really want to change the current power system, we need to make better use of the energy. Nowadays too much is misused or wasted: from the total energy available in the EU, almost a third part is lost or used for other purposes, for example, to produce more energy[3]. With a more efficient



[2] A clean energy transition, Energy and the European Green Deal https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal/energy-and-green-deal_en

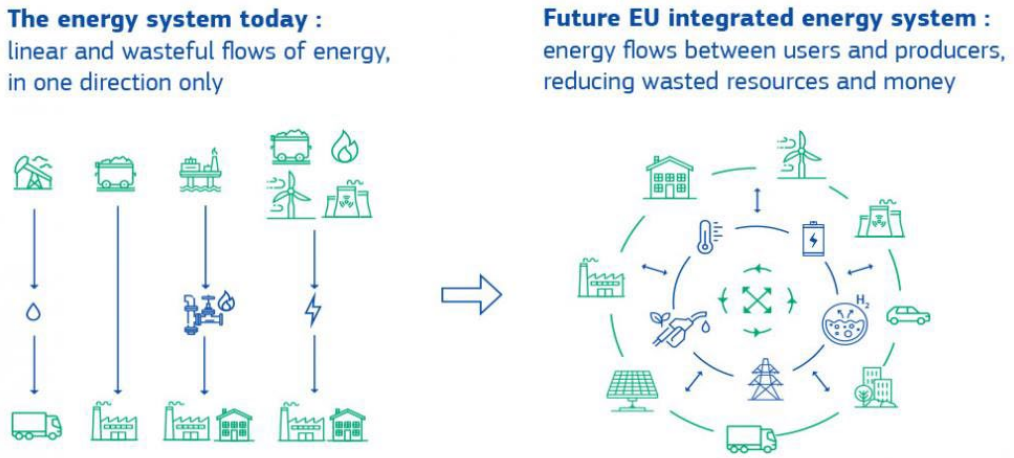
[3] Shedding light on energy in the EU, Eurostat (2022)

energy system, we could reduce the amount of energy that needs to be produced. This way we will also reduce the pollution coming from this activity and make energy more affordable for citizens.

The energy system of the future

The European Commission wants to change how we produce and consume energy: it seeks a cleaner, decarbonised energy system. What does it mean? That the current system will be transformed to lower its CO_2 emissions and become more efficient and interconnected.

Nowadays, the electricity we consume is mainly produced by burning fossil fuels, which consequently creates greenhouse gas emissions. Also, the different types of energy that we use (electricity, gas, heat or petrol) are delivered to consumers in one, linear direction. The electricity we use in our homes is carried through one grid directly from the power plants, the gas for heating through another one, and so on.



EU Strategy on energy system integration, European Commission

What the EU Green Deal goals set is that in the future more electricity will be produced using non-polluting procedures and that green fuels will substitute fossil fuels. At the same time, the energy will be better distributed, connecting different sectors: for instance, solar panels in buildings would generate electricity not only for that building but also for electric cars' charging points located nearby.

This change or transition in the energy field will be guided by three principles:

1. The energy supply must be **secure and affordable**: the energy we need must be guaranteed and everyone must be able to afford it. For that purpose, more energy produced from renewable sources will be used (by citizens, industry, transport, etc.). The energy produced with wind power, for example, is cheaper than the one made using gas. At the same time, that kind of energy could be produced in Europe, and it will make it easier to ensure its supply. Nowadays, Europe needs to buy gas from other countries, like Norway

The new energy sector aimed by the European Commission will be:

- Cleaner: more energy produced from renewable, non-polluting sources.
- More efficient: less energy wasted and more interconnection.
- Affordable
- Reliable: avoiding changes in the supply and prices.

or Russia, and this makes the EU dependent and vulnerable.

2. The European energy market will be modernised by integrating the different energy sources into **a common, digitalised market**. New technologies and infrastructures will be applied to the power sector to lower its carbon emissions, make better use of the energy and develop new ways of making it available for end-users, like citizens, industry or transport.
3. The new sector will be based on **renewable sources and energy efficiency** will be a priority. This will also empower consumers when making decisions regarding their energy consumption and it will tackle energy poverty.

Switching the energy transition on

The EU has already taken some steps towards transforming the power sector. It has prepared a new strategy to integrate the different energy sectors into a more circular, less polluting one: the *EU strategy on system integration*. The strategy sets the roadmap regarding the energy sector to achieve the Green Deal's objectives.

Following the strategy, the Commission has revised seven different directives that define the actions member states have to implement. In parallel, the European Union is also looking for new and greener energy sources, such as green hydrogen and renewable energies from the sea: wind, tides and waves. Other priorities are to reduce methane emissions, the second most important greenhouse gas contributor to climate change, and to link the energy infrastructure of the member countries more efficiently.

EU Strategy on energy transition

1. Create a more circular energy system. It will make better use of energy, improve energy efficiency, avoid waste and improve links between different sectors.
2. Use more electricity produced from renewable sources. The energy we use is mainly produced from the use of fossil fuels, a process that produces big amounts of CO_2. To reverse this situation, renewable energy needs to be increased and to be available for users.
3. More renewable and low-carbon fuels. For some sectors like industry or transport, it is not easy to run only by using electricity: they need big amounts of energy. However, there are environmentally friendly alternatives that can make these sectors cleaner: to use biofuels or hydrogen or to capture, store and reuse the CO_2.
4. Adapt the energy system to be more integrated. Combining different energy carriers will help users to choose the energy that best suits their needs.

New system, more power to citizens

A new energy system will bring us several benefits besides lowering carbon emissions. Connecting the different energy sources and the end users better will make renewable energy more accessible, lowering the dependence on fossil fuels. This way we will use more, and cleaner energy produced with renewable sources like wind, sun, tides or hydrogen.

At the same time, an interconnected system will allow better use of energy, avoiding waste and reducing the amount of energy we use. With a more efficient energy sector, we would need less energy to do the same activities. And if we lower our energy consumption, we will also reduce the quantity of energy that needs to be produced.

Even more, having new, local energy sources can make Europe more independent, and that has also an impact on the price of energy. Now that the EU depends on external suppliers, it lacks control and is vulnerable to changes in the international context. This kind of situation could be avoided with an energy system that integrates different energy sources and that does not rely mostly on one of them.

The current energy production is centralised in big power plants owned by big companies. The future system will be decentralised, producing a small amount of energy in multiple locations, like solar panels on building rooftops or wind farms. The decentralisation will also increase the number of stakeholders in the energy market, like small energy communities formed by neighbours. This would empower citizens, who would have more options and more control regarding their energy choices[4].

More efficiency and more local energy production would also help to reduce energy prices. With more affordable power, energy poverty will be reduced: the number of people that cannot use as much energy as they need just because they cannot afford it will lower. This will improve the living conditions of many citizens.

What happened in Europe and the energy prices and supply when the war in Ukraine started? What has the European Union done?

Do a small research to answer these questions!
A hint: Russia is one of the major gas suppliers for the European Union.

[4] Energy prosumers in Europe, EEA (2022)

3. Buildings

Home, sweet home?

What elements can be improved to lower our houses' environmental impact?

Buildings are responsible for **40%** of European **energy consumption** and **36% of greenhouse gas emissions**.

Did you know that by renovating and modernising our houses and buildings we can make a lot for the environment?

Houses can be built with sustainable materials, designed to be energy-efficient and use renewable energy sources. Also, smart or automated homes can represent the innovative side we need to achieve with the European Green Deal's objectives. When we talk about *smart home*, we refer to the use of technology to automate or remotely control various home functions and appliances.

The integration of new technologies in our buildings is becoming increasingly important as they can help to reduce energy consumption at homes by automating various functions and appliances that would otherwise be left on or running unnecessarily. For example, automated lighting systems can be programmed to turn off when there is no one in the room, and automated thermostats can be used to maintain a comfortable temperature without constantly adjusting the settings. These small actions will make our homes more energy-efficient.

Do you remember why is this relevant for the environment?[5] In short: by controlling the temperature, ventilation, and lighting of a house remotely, it is possible to reduce the amount of energy that is used and thus reduce the greenhouse gas emissions that it causes.

Smart buildings can also help to reduce water consumption. Automated irrigation systems can be programmed to water the garden or lawn only when necessary, and automated plumbing systems can be used to detect and repair leaks quickly before they have a chance to cause significant damage. Moreover, sustainable buildings could also be constructed with materials that have a low environmental impact, such as bamboo or recycled materials.

New buildings for a new Europe

The European Green Deal aims to renovate buildings and increase their energy efficiency as part of the strategy to turn the European Union into a carbon-neutral continent by 2050. In other words, it wants a more energy-efficient, with lower carbon emissions building sector.

The goal is to make buildings more comfortable and healthier for occupants, while also reducing their carbon footprint. To achieve this, the Green Deal aims to improve energy usage in buildings through improved insulation, airtightness as well as heating and cooling systems. In addition, it works to

[5] If not, check the "Energy" chapter on page 7

improve indoor air quality by increasing ventilation and using cleaner, and more efficient heating and cooling systems.

Smart technologies can also help to make buildings more efficient and reduce energy. Smart thermostats, energy-saving appliances, energy-monitoring systems and many other technologies can reduce carbon emissions and make the house experience more innovative.

At the same time, the European Commission is encouraging investment in renewable energy sources such as solar and wind power and the use of green building materials such as wood, bamboo, and recycled materials. All these materials are better for the environment because their production does not emit so many greenhouse gases.

The EU has introduced new regulations, standards, voluntary programmes and initiatives to support member states to make European buildings more accessible for everyone.

It has developed a new policy focused on renovating old buildings. The main goals of this policy are to improve the energy efficiency of buildings, reduce the use of natural resources, and reduce the emissions of greenhouse gases. The policy also requires all new buildings to be designed and built to be energy and resource-efficient.

Better buildings for a better environment

Building and renovating in an energy and resource-efficient way can benefit us, citizens, in several ways. Perhaps the most obvious one is in terms of monthly utility costs. Energy-efficient buildings use less electricity and water, which can lead to lower costs. This also will help to tackle energy poverty and to improve people's living conditions.

In the long run, renovated and energy-efficient buildings can also help to reduce one's carbon footprint. By using less energy, they help to reduce emissions of greenhouse gases because they reduce the amount of energy that needs to be produced. This will also help to reduce Europe's carbon emissions as buildings are responsible for a significant proportion of energy use and emissions.

Modernised buildings can also have a positive impact on the indoor environment. New ventilation systems can help to improve air quality and reduce noise pollution. It also can help to reduce the risk of mould and other indoor air quality problems.

4. Mobility

Is travelling a green hobby?

Imagine that you are planning a trip with your friends.
What of the next transport options is the best?

Option A	Option B	Option C
• It is mostly powered by electricity • It is one of the safest transports • It connects many destinations	• It is the fastest transport for long distances • It needs fossil fuels to work • It can carry many passengers at the same time	• It is the main source of carbon emissions • It carries the fewest passengers • It has the highest death toll

So, A, B or C?

If you have chosen the last option, you would rather travel by car or road, a convenient but completely environmentally unfriendly transport way. If your choice was option B, you and your friends will be enjoying a nice trip by plane, but that would be a harmful choice for nature. And, if you decided to go for the first alternative: congrats! You have chosen the most environmentally friendly transport: the train.

The decision about how we move around might seem irrelevant, but it has a big impact on the environment. The current European transport and mobility system is not compatible with nature conservation. It relays mostly on fossil-fuel-driven vehicles such as cars, trucks or aircraft, which cause a great amount of CO_2 emissions. In fact, just in Europe, transport is the source of around 25% of greenhouse emissions (emissions that have been increasing over the last few years)[6].

But the pollution is not the only a problem caused by our current transport system: cars, trucks and buses are noisy, they create congestion on our roads and the road-transport is one of the less safe mobility options.

These problems are especially notorious in cities: urban areas have been designed for cars, and more sustainable mobility options, like walking or cycling, still need a boost to become a real alternative. Moreover, using these more environmentally friendly transport options is not always possible, because of safety or infrastructure. For example, not every city has separate roads for bikes, thus bikers must drive among cars. This can lead to people avoiding the use of bikes because they feel it could be dangerous.

[6] Transport and the Green Deal; European Commission https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal/transport-and-green-deal_en

Therefore, transport is one of the most urgent fields to transform: to achieve the EU Green Deal objectives, Europe needs to reduce by 90% the CO_2 emissions coming from this field by 2050.

But how?

Rethinking how we move around

To transform our mobility system and habits, the EU Green Deal underlines the necessity of sustainable transport: environmentally friendly transport options that use fewer polluting fuels or that are powered by other energy sources. The Green Deal also notices that to make these options a real alternative, they need to be accessible and affordable. If only a minority of citizens can use them, their impact would not be meaningful enough.

The first thing to tackle is road transport: cars, vans, trucks, etc. They are the most used transport means and powered by polluting fuels, and they produce big amounts of carbon emission. So, we must change both our habits and technology.

For example, the Green Deal highlights the need for more sustainable fuels: if we want to reduce the use of polluting fuels, first, we need alternatives, and they need to be accessible. Sustainable fuels that are more environmentally friendly (like electricity, hydrogen or biofuels) already exist, but it is still difficult to integrate them into our daily lives. At the same time, it expects that, in the future, the prices of the different transport means will reflect how harmful they are to the environment. For example, that would mean that the price of petrol will raise and sustainable options will be more affordable and attractive for users.

Also, the Commission wants to reduce vehicles' carbon emissions. It will revise the legislation about the car and vans emissions to make it stricter and take new steps in the maritime and air sectors as well. Cities are hotspots in this sense: people there still use mainly fuel-driven vehicles, and the design of cities is also centred on cars.

Another strategy to change the European transport system is the boost of combined transport. The Commission wants to increase the freight transport that is carried through railways or waterways to reduce road transport and the harm it causes.

Moving forward towards a sustainable mobility

To achieve its objectives, the Commission has developed the *Strategy for sustainable and smart mobility*[7]. This document is the roadmap about how the current transport system can become sustainable (fewer greenhouse emissions and more alternative transport means), smart (digitalised and interconnected) and more resilient (better prepared to face unexpected situations).

The strategy points out different measures to reduce the current dependence on fossil fuels, increase the use of more sustainable means of transport and charge polluters for their environmentally unfriendly activities.

[7] More about the strategy: https://transport.ec.europa.eu/transport-themes/mobility-strategy_en

Further steps on this matter have focused on the European transport network, smart mobility and mobility in cities (known as *urban mobility*).

The EU wants to modernise the Transnational Transport Network that connects some of the major European cities by improving the combined transport connections, especially railways. The European Commission also aims to boost smart mobility, to make the transport system more efficient and more sustainable.

Cities are also in the institution's focus. The Commission has developed some guidelines to help cities become more environmentally friendly by cutting down carbon emissions and offering more sustainable alternatives to their citizens. It has set common measures for all the Member states to achieve greener, cleaner cities.

Benefits just for the environment?

All the objectives and measures explained above will have an impact on the environment, but also on our lives. These measures will develop more environmentally friendly mobility ways, like trains. So, choosing sustainable transport when planning a trip will be easier: there will be better connections and sustainable transport will be more affordable.

Moving around in cities will also become a greener activity. This will contribute to the good health of citizens: less pollution, more mobility like walking and cycling, and more alternatives to the use of traditional cars (cleaner public transport; more charging stations for electric cars, etc.)

At the same time, thanks to digitalisation, transport will be safer, and this transformation will create new jobs and opportunities in the coming years. The new industry will not be only related to digitalisation. For instance, the bike manufacturing has increased in the last years because the use of e-bikes and cargo bikes is arising[8].

[8] European Mobility Atlas 2021. Facts and figures about transport and mobility in Europe. Heinrich Böll Stiftung https://eu.boell.org/sites/default/files/2021-07/EUMobilityatlas2021_2ndedition_FINAL_WEB.pdf

5. Agriculture

Milk and climate change: drinking for the environment

Let's start our expedition with one popular dairy product: milk.

Just by itself, with cereals or as the main ingredient of cheese, butter and yoghurt, milk plays a big role in the daily life of European citizens. On average, each citizen consumed, just in 2021, around 53.44 litres of milk[9]. However, it is not just a main part of our food consumption, it also represents a significant proportion of the value of the EU's agricultural output[10]. In that context, the EU is one of the world's biggest cow milk producers[11].

What is the connection between milk and climate change?

Take some minutes to think about possible connections between milk and climate change.

If you want, you can write them down and discuss your ideas in a group.

Despite its popularity, milk has one major disadvantage: the way we produce it, damages the climate and the environment.

Cow's milk production's impact on:

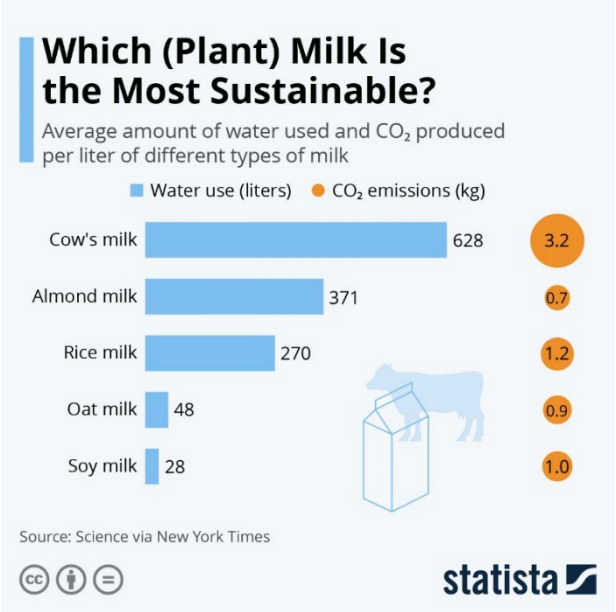
Air	Water	Desertification
Manufacturing and transporting milk produce big amounts of CO2. Also, methane is released naturally from the cow's digestion. The problem is that methane "is 23 times more potent" than CO_2 in the context of global warming.	The production of dairy food uses "large volumes of water to grow food, water cows and process products"[1].	1/3 "of the world's land suffers desertification due, in large part, to deforestation, overgrazing and poor agricultural practices"

[9] https://www.statista.com/statistics/1192244/europe-per-capita-milk-consumption/
[10] https://agriculture.ec.europa.eu/farming/animal-products/milk-and-dairy-products_en
[11] https://www.statista.com/topics/3956/milk-market-in-europe/#dossierKeyfigures

However, this bad news does not mean that you have to stop drinking milk. In the last years, many plant-based milk alternatives have arrived in our supermarkets. In the table below, you can see the impact that dairy and various plant-based alternatives have on our climate and environment:

Cow's milk has by far the most negative impact on our planet: we need 628 litres of water (equals 3-4 bathtubs) to produce one litre of milk, and that process creates 3.2 kg of CO_2.

But, the table shows that we can make a difference and protect the environment with our food choices. Based on the figures presented on it, it is clear that soy milk is much less polluting than cow's milk. Have you ever tried?



Source: https://www.statista.com/chart/22659/cows-milk-plant-milk-sustainability/

Dairy farming has been an important part of the agricultural sector for thousands of years. But, compared to earlier times, animal agriculture and other food systems (like fisheries) have adopted environmentally unfriendly methods. For example, they use many chemical pesticides, whose ingredients harm nature. As a result, our food system "remains one of the key drivers of climate change and environmental degradation"[12]: it accounts for almost 1/3 of global greenhouse gas emissions, consumes huge amounts of natural resources and is one of the main reasons for the loss of biodiversity.[13]

BUT: it is not only on us, individuals, to make a change and to save our planet!

We also need a change on **political and governmental levels**. Here is where the European Green Deal comes into play.

[12] https://www.switchtogreen.eu/the-eu-green-deal-promoting-a-green-notable-circular-economy/
[13] https://food.ec.europa.eu/horizontal-topics/farm-fork-strategy_en

The European Green Deal: solutions, solutions, solutions

As you got to know before, conventional agriculture damages our climate and environment. Therefore, climate neutrality by 2050 cannot be achieved without changing how we produce and consume food. That is why transforming the European food system into a more sustainable one, is a major topic of the European Green Deal.

To ensure the transition into a sustainable and resilient food system, the *Farm to Fork* strategy is one of the most important initiatives of the Green Deal. Its main goal is "to make the food system fair, healthy and environmentally friendly"[14].

The European Commission has thought about different measures to achieve these goals, for example: reducing the use of chemical and hazardous pesticides in agriculture by 50% by 2030, boosting the development of organic farming or introducing mandatory food labelling that covers nutritional, climate, environmental and social aspects of food products, so that citizens can make better and informed food-choices.

Sustainable habits from the field to your fridge

The Farm to Fork strategy intends to transform how we produce, distribute and consume our food by creating new possibilities for consumers, farmers and the food industry. Imagine that the country you live in would start to implement the Farm to Fork strategy.

How would it change our lives?

Would grocery shopping be similar to nowadays? Would the supermarkets look different? Would it change what you would buy? What could change within the natural environment?

What is agriculture?

What would make it sustainable?

What does "sustainable food system" mean?

According to the **Farm to Fork strategy**, a sustainable food system should:

- have a neutral or positive environmental impact (e.g. by using fewer chemical pesticides)
- reverse the loss of biodiversity (e.g. by reducing the usage of heavy chemicals, installing nesting boxes for birds, increasing plant and crop diversity, agroforestry…)
- make sure that everyone has access to enough, safe, nutritious and sustainable food
- preserve the affordability of food while generating fairer economic returns, fostering the competitiveness of the EU supply sector and promoting fair trade

[14] https://food.ec.europa.eu/horizontal-topics/farm-fork-strategy_en

6. Ecosystems & biodiversity

Do you treat your urban jungle better than the forest around the corner?

Plants are decorative, they clean our air and help us to relax. Due to their several benefits for human well-being, filling our homes with plants has become a trend. Plants are alive miracles that transform water, light and air into stored energy. Plants are the superpower to act against climate change as they are the only ones (so far) able to compensate for our misbehavior and bind climate-damaging gases.

For this reason, the EU Green deal has two strategies in this regard: to protect and promote nature and its positive effects and to reduce the harmful human behavior towards nature.

Don’t forget plants and animals!

Do you have a favourite (or just surviving) plant at home?

Take a moment to think about:

- What does your plant need to live?
- How could you kill it immediately?

What needs did you identify? Ideal light conditions, water supply, temperature, fertiliser, suitable soil, enough space, and maybe symbiotic partners.

And, what was the death trap? Drought, flood, extreme conditions (light, temperature), poison, parasites, over-trimming.

This idea is very simple, but if you transfer your answer on a larger scale, you will end up where the EU Green Deal approaches heads. Currently, the conditions for nature are not ideal. Usually, plants were living in places where the natural conditions were suitable: light, temperature, water, climate, soil, and symbiotic buddies (you know the story of bees and flowers…). Not only suitable: it was balanced. But now these conditions are changing rapidly with climate change and nature cannot adapt at the same speed: the balance is broken. Additionally, human life has harmful effects, like soil sealing, pollution of air, soil and water, and extensive extraction of resources.

How the EU Green Deal aims to act

To protect nature	To reduce our harm
• Biodiversity Strategy 2030 • Forest Strategy • Environment action plan	• Action Plan for Circular Economy • Farm to Fork Strategy • Reduction of waste & reuse • Zero-emission-plan • Sustainability Strategy for Chemicals

Stop the harm & support wilderness

To tackle climate change and become a climate-neutral continent, the EU's approach combines two ways to ensure nature preservation: reduce harm and support the existing flora and fauna.

Reducing the harm to nature is reflected in different strategies to reduce nature pollution by chemicals, waste or emissions. It also means dealing better with natural resources, which is included in the Farm to Fork strategy or circular economy strategy[15].

Also, the protection of the existing biosphere and restoration of forests, swamps and useful countryside is essential to meet the goal of a climate-neutral continent by 2050. Therefore, nature's protection is a key of the EU Green Deal. For that, the European Union has two main action fields: protecting biodiversity and boosting the circular economy.

BIODIVERSITY STRATEGY FOR 2030

In the ecosystem, what counts is balanced diversity. This system needs many actors working together. Roots that hold the soil and store water. Leaves that evaporate water and thus enable new rain. Insects process dead matter and thus enable nutrients for new life. All this needs to happen in a balanced way so that the whole system works for every plant or animal (including us).

Human civilization needs biodiversity. Nature provides us with food, energy and raw materials every day. Insects pollinate more than 75% of the world's crops (fruits, vegetables, coffee, cocoa...). Intact ecosystems provide clean air, pure drinking water, and healthy soils; they supply us with medicines and regulate the climate.

Our way of life - especially since the beginning of industrialisation - has had a massive impact on the environment. It has disrupted the previous balance in such a quick way, that nature cannot adapt to it: ecosystems have been damaged and some animals and plants are disappearing.

Therefore, the Biodiversity Strategy developed by the European Commission aims, first, to protect the existing biodiversity. Second, it wants to offer the possibility to recover it by 2030 for the benefit of people, the climate and the planet.

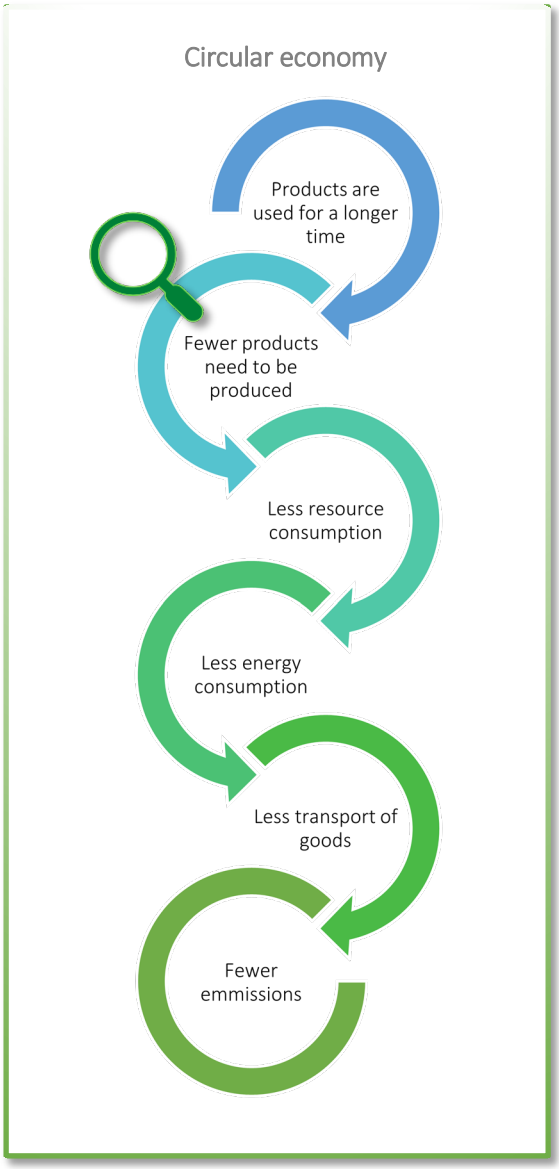
CIRCULAR ECONOMY – IT'S ABOUT MORE THAN PLASTIC STRAWS

Every economic activity is based on resources, from services to production. It is easy to understand that we need resources to produce a smartphone. But also, the workforce relies on food, housing, and electricity. All our consumption needs resources. Unfortunately, we rarely think about their use after we have profited from them. As a result, many things simply end up in the trash, and can no longer be used.

At the same time, the Earth does not offer an infinite supply of new raw materials, so we have to rely on reusable solutions, increased recycling, etc. to make the best use of the available

> ! Conscious use of resources is important for environmental protection and the reduction of climate-damaging emissions.

[15] More details about the Farm to Fork strategy in the chapter "Agriculture" on the page 16



resources. These principles are a component of the circular economy. The circular economy also includes other forms of consumption such as sharing, leasing, reusing, repairing and refurbishing.

Protect biodiversity and consume circularly

To make sure that European biodiversity gets the attention it deserves, the EU has established a new law on nature restoration. It sets an overarching regeneration target for the long-term recuperation of nature in the EU's terrestrial and marine areas, as well as binding restoration targets for specific habitats and species. The new funding is given to advance research, ensure better implementation and track progress, improve knowledge, funding and investment, and take nature into account in public and business decisions.

The EU has now also a new action plan to make our economy more circular. It announces initiatives along the entire life cycle of products and targets how products are designed, promotes circular economy processes, encourages sustainable consumption, and aims to ensure that waste is prevented, and the resources used are kept in the EU economy for as long as possible. It introduces legislative and non-legislative measures targeting areas where action at the EU level brings real added value.

Measures that will be introduced under the new action plan aim to:

- make sustainable products the norm in the EU
- empower consumers
- focus on the sectors that use the most resources and where the potential for circularity is high such as electronics and ICT, batteries and vehicles, packaging, plastics, textiles, construction and buildings, food, water and nutrients
- ensure less waste
- make circularity work for people, regions and cities
- lead global efforts on circular economy

Concrete actions to protect biodiversity can be tracked by the Actions Tracker online tool.

Actions tracker

Targets dashboard

Additionally, a dashboard shows the targets on the EU level and in the member states.

Do we want more biodiversity and a circular economy?

OF COURSE! If you are not sure about this answer yet, here you have some examples.

The Biodiversity Strategy shows well that many efforts are important but will not be immediately visible in the short term. Depending on where you live, you will notice more or less the progress made thanks to these measures. Besides, it will take time before we feel any effects. When cycling or driving, you will experience more insect collisions again. If you walk through the forest for several decades, you should find more different trees again. Since industrialization, an extremely large number of animal and plant species have become extinct. And if we take it seriously, fewer animal and plant species will be extinct and could even recover. And this joke will still be valid:

How do you recognise a happy cyclist?
By the insects between their teeth

A more circular economy will also benefit us. It will lead to a sustainable and fair way of doing business and using resources. This transition towards a new economic model can be hard in its first stages: goods' prices will rise, and the individual wealth of many people will shrink. But, do not forget: this will happen anyway because of climate change! There will be more food shortages in the next 50 years, a period a lot of us will still experience. The good news? If we start now changing our consumption habits, we can slow the effects of climate change and protect the commonwealth.

However, sustainable and socially fair consumption is difficult in the current context. We have different ideals to consume more consciously: vegan and animal-friendly goods, plastic-free elements, regional products, ecologically produced aliments, energy-efficient technologies... And the list goes on. Many different demands to which consumption can be oriented and which sometimes lead to contradictory decisions.

Moreover, it is extremely difficult to obtain reliable and correct information on the manufacturing process and products' materials. This is also because companies are aware that nowadays ecological and social aspects are becoming more important for consumer decisions. Therefore, companies like to present themselves as more sustainable and social than they might be.

Have you ever heard the term "green-washing"?

Search about it or check our **Glossary** if you don't know what it is!

With a well-implemented circular economy, companies would be held more accountable for the long-term environmental impacts of their economic activities. This could also be reflected in the price so that products that have a little negative impact on the environment would be cheaper than products that actually cause great harm. This would also increase the attractiveness of these products and make it easier for consumers to make environmentally friendly decisions.

In the long run, nature would benefit, as production methods would cause less environmental pollution. This would make the landscape, the air and the oceans cleaner. In addition, less waste would be produced, and we would keep items in circulation longer.

If the idea of a circular economy is well implemented, we as consumers will benefit: it will make it easier for us to make environmentally and socially responsible choices. We can already start following this circular logic when consuming, by trying to give goods a longer life by reusing them, recycling, choosing longer lasting and environmentally friendly materials instead of plastic, etc.

7. Pollution

Why use a biodegradable bag?

Let us ask you a question: Do you protect the environment with your daily decisions? For example, is your home filled with paper and biodegradable bags? Or, do you reuse your bags?

If so, congratulations! This shows that you are making conscious decisions, taking into account the environment. But, are you really aware of why it is important to choose products that don't harm the environment?

Do you know why you need to change your habits when choosing products?

How can we protect the environment in our everyday life?
You can write down some ideas and discuss them in a group.

If you need some inspiration, take a look at the previous chapter: Ecosystem & biodiversity

Let's take the biodegradable bag as a starting point. "Biodegradable" refers to the ability of things to get decomposed by the action of micro-organisms such as bacteria while getting assimilated into the natural environment. There is no ecological harm during the process. This is great, isn't it? With biodegradable products we avoid waste, and they can be reused for new purposes, such as making compost.

The world is facing a global plastics crisis.

From the Mariana trench to Mount Everest, there is virtually no place on Earth untouched by plastic pollution.

However, before having these more environmentally friendly alternatives, plastic has been, for a long time, the main material of many daily products. But nearly half of all plastic products are discarded after a single use and it takes them **up to 1000 years** to disintegrate. Big items, such as plastic bags and straws can choke and starve marine life, while smaller fragments (called microplastics) can cause liver, reproductive, and gastrointestinal damage in animals.

But plastic is not the only pollutant damaging our planet: of course, you have heard about the Ozone layer hole caused by air pollution and about toxic leaks in rivers, lakes and seas. All this does not only harm nature. It is also dangerous for us: polluted air

causes respiratory diseases, we receive more harmful sun radiation because of the weakened Ozone layer and we cannot survive with contaminated water.

And what about soil pollution? Usually, when we talk about pollution we tend to look up at the sky, but a lot of pollution is going on right under our feet in the soil which our livestock feeds off and on which we grow our fruits and vegetables. There is a long list of diseases caused by soil pollution for livestock, wildlife and humans. Not to mention the irreversible species extinction of wildlife and decrease in animal habitats such as wetlands.

For all these reasons, preventing and reversing air, water and soil pollution is one of the main points of the European Green Deal.

No more toxic materials

The Green Deal is aiming to create a toxic-free environment by adopting a plan for zero pollution for air, water and soil. This will be done by, among other things, securing clean ground and surface water, restoring diversity in rivers and lakes and preventing damage from floods. It will also implement a new strategy that will reduce pollution, harmful chemicals and microplastics.

The Green Deal aims also to strengthen the monitoring of clean air, especially from larger industries. This will be done by raising the standards for air quality and aligning them with the standards of the World Health Organization (WHO).

The EU's plan to end pollution

To ensure clean and healthy air, soil and water for all European citizens, the European Union has developed the *Zero Pollution Action Plan*. It is made to secure a better and healthier environment for especially children, the elderly and people with health issues. It also aims to increase biodiversity and reduce carbon emissions, while respecting the planet and its boundaries.

Here are some of the main objectives of the Zero pollution action plan for 2030:

- Improve air quality to reduce the number of premature deaths caused by air pollution
- Improve water quality by reducing waste, plastic litter at sea and microplastics
- Improve soil quality by reducing nutrition losses and chemical pesticides
- Reduce waste generation and by 50% residual municipal waste

How will this affect us?

There are many ways that the reduction of pollution will affect our way of life, both for good and bad. Here are some of the most striking examples:

<u>Less energy consumption with biodegradable plastics:</u> Less energy is needed in the manufacturing of biodegradable plastics compared to ordinary plastics. For instance, the manufacture of corn-based polymer requires 65% less energy compared to a similar polymer made from petroleum.

Manufacturing bioplastics also does not require the process of finding, accessing, and transporting hydrocarbons.

Carbon pricing: Aligning taxation with climate objectives will encourage consumer and business behaviour. This means that the individual life will be affected by higher pricing on some items that have a high carbon emission footprint.

Reduction of the amount of waste produced with biodegradable plastic: Biodegradable plastic breaks down only in a period of a few months, depending on the material used to make the bioplastic and the method of disposal. Other types of traditional plastic constitute 13 per cent of the waste stream, which is 32 million tons of trash annually, and only 9 per cent of this type of plastic can be recycled.

8. Research & innovation

Put your imagination to work!

There is a big gap between our current lifestyle and the one that does not hurt the planet. However, there are two things that we can do to reduce it: understand how our habits damage the environment, and find ways to transform them. This is, precisely, what research and innovation seek.

They are one of the pillars of the European Green Deal. Innovation and Research focus on all the academic and business potential in the development of better and new solutions to the current social, economic and environmental challenges. If our current technology damages the environment, then we need to develop it more sustainably or invent a new one, don't you think?

Solar power banks are an excellent example of how innovation and research can help meet the Green Deal's objectives. Solar power banks are portable devices that allow users to store solar energy to use it later. They can be little as the normal power banks we bring with us to recharge our smartphones and big enough to produce and store energy for an entire house. They merge two existing technologies (solar panels and batteries) to offer a sustainable solution to our energy needs. Maybe now it seems obvious that these two things make a great team, but behind it, there is a lot of research and innovation!

If you don't believe us, ask your parents or grandparents if when they were your age, they had a similar technology.

Can you think about other innovations that help us not hurt the environment?

Old problems, new solutions

The importance of funding Research and Innovation can be determinant in the development of new solutions to face the environmental and social challenges we are currently facing. The new way to push forward these processes in the European Commission is the Mission-oriented policy schemes[16]. A way to direct public investments to properly work on new solutions.

The main instrument for the EU to invest in Research and Innovation is the Horizon Europe Programme and it started using the new Mission approach. They aim to capture citizens' imagination and inspire confidence in the transformations ahead. The Missions are bold, concretely measurable and they have a time horizon.

The Green Missions:

- Adaptation to Climate Change: support at least 150 European regions and communities to become climate resilient by 2030.
- Restore our Ocean and Waters by 2030.
- 100 Climate-Neutral and Smart Cities by 2030
- A Soil Deal for Europe: 100 living labs and lighthouses to lead the transition towards healthy soils by 2030.

There are 4 Green Missions, through which the European Commission made 1 billion euros available under the Green Deal call to contribute to our response to the climate crisis and help protect Europe's unique ecosystems and biodiversity. It will contribute to implementing large-scale changes in areas such as adaptation to climate change, oceans, cities and soil.

Digital innovation will be at the centre of this revolution as well. The Commission will encourage efforts to fully realise the advantages of the digital revolution to help the ecological transition. Data that is both accessible and interoperable is the basis of data-driven innovation. This data will increase our understanding of and ability to address environmental concerns thanks to the connection with the digital infrastructure, including supercomputers, the cloud, ultra-fast networks, and artificial intelligence tools.

All these missions will bring together a wide range of players including regions, all types of organisations and citizens. Different bodies and European institutions will play key roles in this map: the European Institute of Innovation and Technology (EIT) will contribute to activating the knowledge and innovation communities, higher education institutions, research organisations and companies in different fields. The European Innovation Council will dedicate funding, equity investment and business acceleration services to high-potential start-ups and companies that will grow faster to scale rapidly to have a global impact. Partnerships with industry and Member States will support research and innovation on transport, including batteries, clean hydrogen, low-carbon steel making, circular bio-based sectors and the built environment.

[16] European Commission Independent Expert Report, Mazzuccato Mariana (2019) Governing missions in the European Union https://research-and-innovation.ec.europa.eu/knowledge-publications-tools-and-data/publications/all-publications/governing-missions-governing-missions-european-union_en

Exploring new horizons

Research and innovation have a major role in the European Green Deal and it is focused on the EU's research and innovation programme (2021-2027) called "Horizon Europe". Horizon Europe is a powerful instrument and it is set to drive the necessary systemic changes to reach climate neutrality and ensure an inclusive ecological and economic transition. Horizon Europe is the EU's key funding programme for research and innovation with a budget of €95.5 billion.

These proposals aim to make all sectors of the EU's economy fit to meet this challenge. They set the EU on a path to reach its climate targets by 2030 in a fair, cost-effective and competitive way. For this reason, *Research & Innovation* are fundamental to realise the immense potential of technological and organisational transformation.

The EU works closely with industry and countries to support partnerships in critical areas such as transport - including batteries - clean hydrogen, low-carbon steel, circular bio-based sectors, the built environment and biodiversity.

The EU's key funding programme for research and innovation faces the main **societal challenges** of our Age:

- Tackles climate change
- Helps to achieve the UN's Sustainable Development Goals (SDG)
- Boosts the EU's competitiveness and growth
- Facilitates collaboration and strengthens the impact of research and innovation in developing, supporting and implementing EU policies while tackling global challenges
- Supports the creation and better diffusion of excellent knowledge and technologies
- Creates jobs, fully engages the EU's talent pool, boosts economic growth, promotes industrial competitiveness and optimises investment impact within a strengthened European Research Area

Thinking the future European Union

The European Green Deal is a major initiative that will have a significant impact on the lives of individuals. It aims to transform the European Union into a climate-neutral continent by 2050. This will require fundamental changes in how we produce and consume energy, how we move around, and how we manage our natural resources.

The transition to a climate-neutral economy will bring many benefits for citizens, including cleaner air and water, more green spaces, more jobs in clean industries, and greater security from the impacts of

climate change. It will also help reduce Europe's dependence on imported fossil fuels, making us less vulnerable to energy shocks and price fluctuations.

To make this happen, the Green Deal sets out an ambitious package of measures that includes:

- Investing in renewable energy sources such as solar and wind power;
- Increasing energy efficiency in homes, buildings and transport; grounded flights & high-speed trains)
- Promoting sustainable agriculture practices, (vertical farming)
- Supporting research & development into new green technologies; (carbon capture & storage)
- Creating millions of new jobs across Europe in clean industries; (solar panel manufacturing)

These are just some examples.

9. Fair Transition

Can everybody go green?

Most of us use toothpaste in our everyday life, it is something that we do so often that we end up not thinking so much about it and the impact that it has on the environment. It might come as surprise but some ingredients in toothpaste are harmful to the environment like Brilliant Blue FCF. It is a colourant harmful to marine life. It is a dangerous substance that remains in the water. A small amount of toothpaste may not be harmful, but when a large number of people use it (which they do), it can have disastrous effects on marine life.

Not only the ingredients (like micro plastic) in toothpaste are bad for the environment, but so is the packaging. Most toothpaste tubes are made of plastic and are difficult to recycle. Plastic is an oil product, and the process of creating and recycling it emits a large amount of CO_2 into the atmosphere. To sum up, the production and use of toothpaste are extremely harmful to the environment. Now that you know this, you might want to use more environmentally friendly toothpaste which contain not micro plastic or is not packed in plastic.

Have you noticed that most of the time "green" products are more expensive than the usual brands?

What effect can this have on citizens?

This makes it so that, too often, choosing environmentally friendly alternatives depends on citizens' economic situation. That is something that the European Green Deal wants to end: the transition towards a greener European Union needs to be just and can leave no one behind.

A transition for everyone

Fairness and solidarity are key principles of the European Green Deal. To capitalise on the employment and social potential of the green transition and ensure that no one is left behind, it is essential to mobilise all available tools and funding, engage with stakeholders and communities throughout the transition and put the right policies in place.

The EU as a whole, including micro, small, and medium-sized businesses, will gain. The persons and families most impacted by the green transition should be given special consideration in any policy packages proposed by Member States, including:

- people living in or at risk of poverty and/or energy poverty
- people facing barriers to mobility
- people experiencing an overburden of housing costs
- people furthest away from the labour market, for instance due to their skills
- people who will transition into new jobs and need to adapt their skill-set through training

European Commission, December 2021

Besides protecting the environment, the green transition aims to:

- Result in an additional 1 million jobs by 2030 and over 2 million by 2050 if the correct policies are put in place.
- Ensure affordable access to essential services such as energy, mobility, and housing
- Actively support quality employment
- Give everyone access to education and instruction
- Ensure equitable tax-benefit structures and enough social safety nets

Tips to leave no one behind

EU's Green Deal aims to transform polluting and unsustainable practices, like the production of toothpaste, into worth-generating practices that do not hurt the environment or ecosystems. Without compromising no one's life.

The European Union has approved a *Recommendation* that provides specific guidance to assist Member States in developing and implementing policy packages that ensure a fair transition to climate neutrality.

For example, some people and households rely heavily on fossil fuels, and may be disproportionately affected by the green transition. The Recommendation encourages Member States to make the best use of public and private funding while working closely with social partners.

Simultaneously, European institutions stress that the EU and its Member States must continue to improve their capacities to anticipate change and provide targeted assistance to regions, industries, workers, and households facing future challenges.

To further ease a fair transition and help citizens and companies take advantage of the opportunities that come with the green deal, the EU has launched the Just Transition Fund and the Just Transition Platform.

JUST TRANSITION FUND

This Fund will be used in the development of specific territories that might face more challenges to adapt themselves to the ecological transition. A dialogue will be carried out through the Commission, to plan and set out the challenges in each territory, as well as the development needs and objectives to be met by 2030. The territories that will benefit from the fund are identified in the just transition plans.

To assure a fair transition, the proposal includes:

- Policies to promote quality employment and ease job transitions towards a greener job and business sector
- Policies to promote equal access to high-quality education and training to boost skills and knowledge relevant to the green transition
- Measures to support equitable taxation and social protection systems that contribute to climate goals
- Policies to support affordable access to essential services
- Policies to coordinate policy action and involved all stakeholders: civil society, regional and local governments, companies, etc.
- Making the best use of public and private funds

JUST TRANSITION PLATFORM

Member states and regions are not left alone in this process. The European Union has a Just Transition Platform to support stakeholders in implementing all the changes and reforms.

The Just Transition Platform supports the just transition in EU member states and regions. It comprises a support desk and a single access point. It offers thorough technical and counselling help and details about the funding, including opportunities, pertinent regulatory changes, or sector-specific efforts. The Platform actively encourages the sharing of best practices among all parties engaged, including through frequent in-person and online get-togethers.

For all and with all

The purpose of the Green Deal is not to stop people from using important products that they have used their entire lives. The goal here is to replace the production methods or sometimes the products themselves to make both their production and usage as sustainable as possible.

The shift to a green economy will alter the way we work, move, and live. To fully realise its promise for employment and societal advancement, we need well-designed policies. No one should be left behind in the Union's just transition to climate neutrality by 2050, especially the individuals and families most dependent on fossil fuels and affected by the green transition, as well as those who are already in disadvantaged circumstances.

The European Union estimates that the green transition may bring two million new high-quality employment in the EU with the proper policies in place by 2050. There will likely be new work possibilities in industries like building, environmentally friendly transportation, the generation of renewable energy, or the circular economy (including repair and re-use business models). By addressing pre-existing socio-economic inequities and social exclusion, enhancing health and wellbeing, and advancing equality, the green transition can assist.

It is crucial to properly utilise all available tools and implement the appropriate policies at the EU, national, regional, and local levels. Support for sustainable living, transportation, and consumption provides win-win solutions by addressing pre-existing disparities and advancing the greening process of our economy and society at the same time.

10. Glossary

The European Green Deal

EU GREEN DEAL: a European roadmap to face climate change and transform the European Union into a more environmentally friendly and sustainable continent.

EUROPEAN COMMISSION: it is the government of the European Union. It proposes new laws, applies the ruling ones and implements the European policies and budget. It also executes the decisions of the European Parliament and the Council of Europe and represents the EU in the international field. It is formed by one president (currently Ursula von der Leyen) and 27 Commissioners, each responsible for a topic. **CLIMATE-NEUTRAL:** reducing greenhouse gas emissions as much as possible or compensating for any remaining emissions to achieve a zero emissions balance.

CLIMATE-RESILIENCE: resilience is the capacity to overcome difficulties. When applied to climate change, it refers to the capacity of societies, economies and ecosystems to cope with dangerous events, like droughts, heat waves or floods. It includes the ability to prevent, adapt and recover from those incidents.

Energy

CLEAN ENERGY: the energy generated without polluting, mostly not producing CO_2. Most of the renewable energies are clean (wind, solar or water energies), but not all. Biofuels are renewable sources since are made with natural, endless resources. However, they are not clean because they need to be burnt to produce energy and that process generates greenhouse gases.

DECARBONISATION: the process to reduce the CO_2 emissions produced by human activity. It can be applied to many different sectors, such as energy, industry or transport. Eventually, the objective is to end all carbon emissions.

ENERGY EFFICIENCY: using less energy to perform the same tasks and, in consequence, reducing the waste of energy. Using energy better helps to reduce pollution (no need to produce so much) and saves money (no need to consume so much).

CIRCULAR ENERGY SYSTEM: a circular system is a system based on efficiency, reuse and waste reduction of goods. Applying it to the energy sector means that energy is better used by using less to do the same tasks, avoiding its waste and reusing the excess.

ENERGY POVERTY: it means not being able to afford energy. This happens when users cannot pay their power bills. Then, they are forced to reduce their consumption by not heating the households or not using electric devices. This situation affects their physical and mental health, and well-being.

Buildings

RENOVATION: a type of home improvement that involves making changes and additions to the structure of an existing home. This can include anything from adding a new room to completely gutting and rebuilding the interior of the house. In the frame of the Green Deal, it refers to the efforts to make existing buildings more energy efficient and environmentally friendly.

BUILT ENVIRONMENT: is the human-made space in which we live, work, and play. It is the physical fabric of our communities and includes all the buildings, roads, and other infrastructure that make up the community.

SUSTAINABLE BUILDINGS: they are designed and built to be environmentally responsible and resource-efficient throughout their life cycle. Sustainable construction means the practice of creating structures and using processes that are environmentally responsible and resource-efficient throughout a building's life cycle from design to construction, operation, maintenance, renovation, and deconstruction.

Transport & Mobility:

SUSTAINABLE TRANSPORT: any transportation way that has a low environmental impact or none, like trains, electric cars, cycling or walking. At the same time, it also refers to the use we make of transport: using public transport, sharing cars to avoid travelling one person per vehicle, etc.

MULTIMODAL TRANSPORT: the use of different vehicles or ways (roadways, railways or waterways, for instance) to travel or transport goods in the same itinerary, combining them.

ALTERNATIVE FUELS: fuels or power sources that serve, at least partly, as a substitute for fossil sources (like oil, gas and coal) to supply energy for transport. Some of these are electricity, hydrogen or bio-fuels produced by plant-based materials (biomass).

SMART MOBILITY: the application of information and communication technologies (ICT) and digitalisation to the transport sector to make it safer, more efficient and more sustainable. It applies the benefits of data analysis and artificial intelligence to mobility.

URBAN MOBILITY: it refers to the way people and goods move from one point to another in a city or urban area, by any transport means or purpose. It connects different aspects involved in this process, such as vehicles, pedestrians, roads, traffic and safety, among others.

Agriculture

AGRICULTURE: Agriculture generally deals with the cultivation of soil, growing crops and raising livestock and is thus essential for food production for humans (and farm animals). Furthermore, agriculture also includes the preparation of plant and animal products for different usage-purposes (e.g. wool, paper products, and cotton).

INDUSTRIAL AGRICULTURE: the type of agriculture where large quantities of crops and livestock are produced through industrialised techniques. The goal of industrialised agriculture is to increase crop yield, which is the amount of food that is produced for each unit of land. Crops and livestock made through this type of agriculture are produced to feed the masses and the products are sold worldwide.

FOOD SYSTEM: all the people, services, processes, infrastructure and organizations that take part in producing, distributing and consuming food.

FARM TO FORK STRATEGY: the European Commission's roadmap to make the European food system fair, healthy and environmentally friendly.

SUSTAINABLE AGRICULTURE: producing food and livestock over the long term with minimal negative effects on the environment. It is undertaken by a society to produce the greatest quantity of food over the longest time to feed a growing human population while keeping the environment intact.

Biodiversity & circular economy:

CIRCULAR ECONOMY: is a model of production and consumption, which involves sharing, leasing, reusing, repairing, refurbishing and recycling existing materials and products as long as possible. In this way, the life cycle of products is extended. A circular economy is based on the principles of designing out waste and pollution, keeping products and materials in use, and regenerating natural systems. In contrast to the 'take-make-waste' linear model, a circular economy is regenerative by design and aims to gradually decouple growth from the consumption of finite resources.

GREEN WASHING: to make people believe that your company is doing more to protect the environment than it really is.

PLANETARY BOUNDARIES: there are 9 planetary boundaries defined (that can be shown in the graphic).

Pollution

BIODEGRADABLE: "Biodegradable" refers to the ability of things to get disintegrated (decomposed) by the action of micro-organisms such as bacteria or fungi biological (with or without oxygen) while getting assimilated into the natural environment. There's no ecological harm during the process. We can either speak of biodegradable solids (also called compostable) or liquids that biodegrade into water."[17]

PLASTIC POLLUTION: Plastic pollution is basically the accumulation of plastic waste in the environment that is thrown out into nature and has a negative effect on the environment and the habitat.

[17] https://youmatter.world/en/definition/biodegradable-plastic/

AIR POLLUTION: "Air pollution is contamination of the indoor or outdoor environment by any chemical, physical or biological agent that modifies the natural characteristics of the atmosphere.

Household combustion devices, motor vehicles, industrial facilities and forest fires are common sources of air pollution. Pollutants of major public health concern include particulate matter, carbon monoxide, ozone, nitrogen dioxide and sulphur dioxide. Outdoor and indoor air pollution cause respiratory and other diseases and are important sources of morbidity and mortality."[18]

WATER POLLUTION: Water pollution is one of the more well known forms of pollution, and something surely everyone knows about. You see it often when on a beach or out sailing – the small pieces of plastic on the surface of the sea.

"Water pollution is the contamination of water sources by substances which make the water unusable for drinking, cooking, cleaning, swimming, and other activities. Pollutants include chemicals, trash, bacteria, and parasites. All forms of pollution eventually make their way to water. Air pollution settles onto lakes and oceans. Land pollution can seep into an underground stream, then to a river, and finally to the ocean. Thus, waste dumped in a vacant lot can eventually pollute a water supply."[19]

SOIL POLLUTION: "(…) This invisible affliction appears when the concentration of pollutants on the surface becomes so high that it harms land biodiversity and endangers health, particularly through food. Activities such as stock breeding and intensive farming use chemicals, pesticides and fertilisers that pollute the land, just as happens with heavy metals and other natural and man-made chemical substances[20].

Research & Innovation

INNOVATION POLICY: a policy that provides guidance on how to foster innovation within an organization or country. It can include measures such as investing in research and development, encouraging entrepreneurship, and creating an environment that is conducive to innovation.

RESEARCH POLICY: a plan or guide that an organization uses to determine how it will conduct research and how funds will be distributed. The policy may cover topics such as the types of research that will be conducted, who will be responsible for conducting it, and how the results will be used.

INDUSTRIAL STRATEGY: a plan that the government develops to improve the economy of a nation regarding its industry sector. This can include initiatives to increase productivity, encourage innovation, reduce trade barriers, and create jobs.

[18] https://www.who.int/health-topics/air-pollution#tab=tab_1

[19] https://watereurope.eu/eu-commission-report-shows-more-needs-to-be-done-against-water-pollution-from-nitrates/

[20] https://www.iberdrola.com/sustainability/soil-pollution-causes-effects-solutions

The fair transition

JUST TRANSITION

The European Commission aims to transition all the activities from production to the way we move around from dependent on fossil fuels to sustainable. It is then crucial to mobilise all available resources, including funding and tools, engage with stakeholders and communities throughout the transition, and put the appropriate policies in place if we are to fully realise the employment and social potential of the green transition and guarantee that no one is left behind.

JUST TRANSITION MECHANISM

A crucial instrument for ensuring that the transition to a climate-neutral economy occurs fairly and leaves no one behind is the Just Transition Mechanism (JTM). To lessen the socioeconomic effects of the transition, it offers targeted assistance to help mobilise almost €55 billion during the years 2021–2027 in the most impacted regions.

COUNCIL RECOMMENDATION ON ENSURING A FAIR TRANSITION TOWARDS CLIMATE NEUTRALITY

A suggestion for ensuring a fair transition to climate neutrality was approved by the Council. The adoption of policies that address the employment and social elements of climate, energy, and environmental issues is encouraged among the member nations.

The recommendation promotes specific initiatives to help those who will be most impacted by the green transition, such as encouraging the development of high-quality employment and making it easier for individuals to obtain safe working conditions that will safeguard their health and safety during this transition. Additionally, it emphasises education and training initiatives and asks member states to incorporate the social and employment components of the green transition into the creation and execution of pertinent national programs.

Other ideas focus on making the tax-benefit and social protection systems more equitable as well as ensuring that those most impacted by the green transition have access to affordable housing and basic services.

Project title: EU Green Deal pops up in future generations newsfeed

Project acronym: U.Pin

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