



***Educational material for the training seminar in the framework of the project
EnvironmentYou - Environmental Management Enhancement by Youth-run SMEs***

Educational Thematic

Eco-friendly Business

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Table of Contents

Unit 1: Auxiliary Terminology for ECOFRIEDLY.....	3
Subsection 1.1. Biodiversity	3
Subsection 1.2. Environmental Footprint.....	9
Subsection 1.3. Green Marketing.....	14
Summary of Educational Unit 1.....	18
Self-assessment Questions – Educational Unit 1	19
ANNEX - UNIT 1	21
Unit 2: What is ECOFRIEDLY? Current situation in the EU	23
Subsection 2.1. Eco-friendly Business	23
Subsection 2.2 Circular Economy	32
Subsection 2.3 What is biodiversity strategy and how is it linked to the restoration of nature in our lives?	57
Summary of Educational Unit 2.....	89
Self-assessment Questions – Educational Unit 2	90
ANNEX - UNIT 2	94
Answers to the Self-assessment Questions (in the form of an annex)	94
Unit 3 How to make a business ECO-FRIENDLY – Success examples	97
Subsection 3.1. Steps to create an Eco Friendly business.....	98
Subsection 3.2. Examples of Eco Friendly busines	101
Subsection 3.3. Eco Friendly business benefits.....	120
Summary of Educational Unit 3.....	125
Self-assessment Questions – Educational Unit 3	127
ANNEX - UNIT 3	129
Answers to the Self-assessment Questions.....	129

Unit 1: Auxiliary Terminology for ECOFRIEDLY

Purpose

The purpose of this training unit is to inform and explain to the trainees the terminology that concerns the whole spectrum of green entrepreneurship. There are many concepts in this field that need to be clarified by the participants in the training program. This clarification needs to be done in the original section so that the other sections can be more easily understood.

Expected Results

Upon completion of the training unit the trainees will know:

- What is Biodiversity and why it is important
- What is an environmental footprint and how is it measured
- What is Green Marketing

Key Concepts

- Biodiversity
- Environmental Footprint
- Green Marketing

Subsection 1.1. Biodiversity

The word "biodiversity" is an abbreviation of the term "biological diversity". According to Article 2 "Definitions" of the Convention on Biological Diversity, "biological diversity means the diversity of living organisms of all origins including, inter alia, terrestrial, marine and other aquatic ecosystems and ecological complexes of which they are a part. It also includes diversity within species, between species and ecosystems." In a few words, biodiversity is defined as the diversity of life in all its forms (plants, animals, fungi, etc.) and at all levels of its organization (genes, organisms, ecosystems).

The concept of biodiversity therefore embraces all life on Earth. It includes the way of expressing or appreciating the diversity that exists at the various levels of the organization of life. It reflects the number, variety and variability of living organisms and the systems that make them up.

Biodiversity is usually considered at three levels:

Genetic diversity: It expresses the range of inherited characteristics of a particular species. The greater this range, the greater the ability of the species to survive against external pressures (stress) such as epidemics, climate adversity, etc. Natural species have a much wider range of inherited ancestry, therefore, they show a much greater ability to adapt and survive than "artificial" or genetically improved species. In Greece, due to various factors, both plant species (especially trees) and animal species, show great genetic diversity, a fact that gives particular importance to the country as a "bank" of genes and genetic material in general, which must be investigated and maintained.

Diversity of species: It expresses the number (amount) of species (plants, animals, fungi, etc.) that can be found in a specific area or ecosystem. Species diversity affects the ecological balance, stability and function of the reactive mechanisms of an ecosystem. The more species involved in the composition of an ecosystem, the greater the stability of the ecosystem, the denser the network of food chains and biosystems, the smoother the biomass and energy flows and the recycling of nutrients and the better and more efficient the reactive mechanisms work. In addition, many species in their ontogenetic evolution are closely related to each other and the existence of one depends on the existence of the other. In conclusion, it is obvious that: a) the extinction of a species can have unpredictable consequences and b) sustainable management cannot be exercised without protecting and conserving the diversity of the species.

Diversity of ecosystems: It expresses the number (amount) of ecosystems that can be found in a particular area. The number of ecosystems and the way they are distributed in the area, ie the mosaic of ecosystems, characterizes and gives its stamp to the

landscape of an area. The protection of ecosystems ensures not only the protection of the species that compose them but also the preservation of the physiognomy of the landscapes.

These three levels correspond to the equal, fundamental and hierarchically connected levels of life organization. Each level has a different meaning but in reality it is an integral part of a single whole.

The term "ecosystem" is the abbreviation of the term "ecological system". An ecosystem is a dynamic complex of communities of plants, animals and microorganisms, as well as elements of their abiotic environment that interact as a functional unit.

An ecosystem has four key features:

Biotic (living) components

Abiotic components (eg. water, soil, climate)

Interactions within and between the above two components, through energy flows in the physical space in which it exists and operates.

The modern concept of ecosystem also includes the concept of "services" of the ecosystem, recognizing the benefits provided by the natural world to humans.

Sustainable use means the use of components of biodiversity, in a manner and proportion that does not cause long-term shrinkage of biodiversity, thus maintaining its potential to meet the needs and aspirations of present and future generations.

The term also includes the concept of sustainable use of natural resources, so that the environment gives the maximum sustainable benefit to current generations, while maintaining the potential to meet the needs and expectations of future generations.

Why is biodiversity important?

Biodiversity is essential for the preservation of life on Earth, as it is the foundation of the vast range of goods and services provided by ecosystems that make a decisive contribution to human well-being. Human decisions that affect biodiversity, affect the well-being of humans themselves along with other organisms.

Biodiversity:

- Is important for our health and well-being
- Improves our quality of life and enhances our standard of living
- contributes to social well-being and cohesion and offers new opportunities for investment and employment

Ecosystem services are defined as the processes and functions that are provided by the natural environment and benefit humans. The services provided by natural ecosystems are classified into four categories:

Productive, such as the production of food, fuel, fiber and medicine

Regulatory, such as regulating the quality and quantity of water, air and climate

Supportive / Protective, such as maintaining soil fertility and nutrient cycle, primary production

Cultural / Spiritual, such as education, ecotourism, outdoor recreation

Ecological benefit

- Trees - bushes: capturing CO₂ from the atmosphere, oxygen production, soil formation, provision of habitat and food for other plants, animals, fungi and microorganisms.
- Insects, bats, birds (and other animals): important for plant fertilization (pollinators).
- Parasites - predators: natural control of populations.

- Earthworms - bacteria: recycling soil organic matter, preservation of soil fertility and productivity.
- Forests: retention of gaseous pollutants (key factor in reducing global climate change), modification of flood and erosion phenomena, noise suppression, and support of food networks, etc.
- Wetlands: water storage, support of food networks, enrichment of underground aquifers, trapping of sediments and toxic substances, modification of flood phenomena, etc.

Financial Benefit

- Food: species are hunted, caught, harvested (eg berries, mushrooms, grasses, snails), farming and aquaculture.
- Fuels: wood and coal are just two examples of natural resources used for energy production.
- Housing/Protection: timber and other forest products are used as building and construction materials, fibers (eg wool, cotton) and leathers meet clothing/footwear needs.
- Medicine: natural/traditional or as a processing product come from biodiversity, e.g. penicillin is produced from mold, codeine is derived from poppies, aspirin is made from the bark of White Willow (*Salix alba* - salicylic acid).

Social benefit

- Research, education, monitoring: There is still a lot to learn about what and how many species exist, how to make the best use of biological resources, how to maintain the genetic basis of the species, how to restore degraded ecosystems, etc. Natural areas are extremely vibrant laboratories for valuable research in various fields of biological sciences (ecology, evolution, etc.).
- Leisure & tourism: Biodiversity is a hub for tourism and leisure activities, which have already expanded rapidly into natural environments and are often the

main source of income for the local population. People value these areas in a variety of interests: videotaping, painting, photography, bird watching, ecological fieldwork and other scientific activities.

- Culture: The conservation of biological diversity is of particular importance for the formation of cultural identity as human cultures evolve together with their environment. It also covers many of the human needs for inspiration, aesthetics, meditation and education, for all the cultures of yesterday, today and tomorrow.

- Natural ecosystems and landscapes contribute to the emotional and spiritual well-being of humans.

- The presence of a large set of living organisms reminds us that humans are only a part of the Earth and that there are interdependent relationships between organisms.

- Landscapes reflect cultural diversity, incorporate local history and inspire different populations for thousands of years.

The real value of biodiversity, however, is incalculable, as it enables us and all living organisms to survive and adapt to a changing environment.

International studies and research agree on the fact that we are wasting the earth's natural resources and endangering the ability of ecosystems to support future generations. Whatever short-term benefits arise, they will undoubtedly be reversed by massive long-term losses. The deterioration can only be addressed if there are substantial changes in policy and practice.

Greece is especially gifted – compared to the other European countries of the European Union - in terms of biodiversity, and it bears a corresponding moral responsibility for its conservation, its sustainable use, and the fair and equal distribution of the benefits that will result from the use of genetic resources for generations to come.

Greek nature and biodiversity

Greece is in a privileged position compared to other European countries, in terms of biodiversity, due to its geographical location, diverse relief, diversity of landscapes, wide variety of habitats, as well as the richness and extent of its cultural heritage. For this reason, it bears a corresponding responsibility for its conservation, its sustainable use, and the fair and equitable distribution of the benefits that will result from the use of genetic resources for future generations.

The country is characterized by particularly rich flora and fauna, as well as a wide variety of landscapes and ecosystems. Indicatively, for Greece, there are about 6,600 species and subspecies of angiosperm plants and more than 23,000 species of terrestrial and freshwater animals.

One of the most important features of biodiversity in Greece is the high endemism in most animal and plant groups. Many endemic species have a very limited distribution (eg on a single island) and are therefore very sensitive to disturbances.

Greece hosts great terrestrial, wetland, coastal and marine ecosystems. In terrestrial ecosystems, forests as well as Mediterranean ecosystems (rusk and makki) cover a large area and are of high importance. Wetlands include lakes, swamps, lagoons, salinas, estuaries, etc. Coastal ecosystems include sandy shores, rocky shores, dunes, etc. and marine ecosystems include Posidonia beds. Some wetlands, such as lagoons and estuaries, are also considered coastal ecosystems.

Traditionally, protected areas have been considered the cornerstone of on-site conservation of biodiversity.

Subsection 1.2. Environmental Footprint

The environmental footprint is a way of measuring the effects that human activities have on Earth. It is the measure of demand and consumption that estimates the coverage of the needs of a society, as well as the waste and greenhouse gases that it produces daily in areas of productive sea and land surface. It also estimates all the

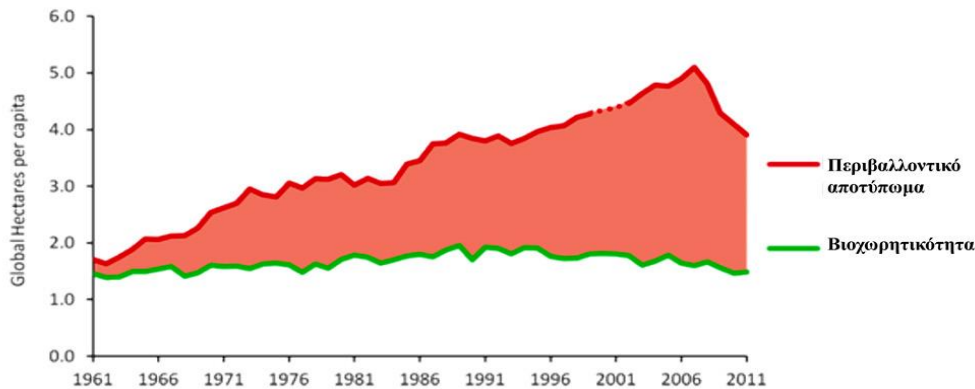
natural resources needed to support the material needs of a population or an individual based on the technology, lifestyle and habits of each country. The unit of measurement of the ecological footprint is 1 hectare, which is equal to 10 acres or 10,000 square meters respectively.

Environmental (or ecological) footprint is a term of ecology and is used as an indicator of human disturbance in the Earth's ecosystems. It is a standard measure of the impact of people on their natural environment, in terms of consumption of natural resources and pollution. It compares the demand for vital needs with the ability of the planet's ecosystems to regenerate. It represents the area of biologically productive land and sea areas required to produce the resources consumed by a human population and at the same time to absorb and inactivate the pollutants and waste it generates. Using this description, it is possible to estimate by scientific methods how much land is needed to support the total human population with its particular way of life. For the year 2013, the total environmental footprint of humanity was estimated at 1.5 Earths.

In other words, it took one and a half Earths to meet the needs of the total human population (in food, clothing, housing, etc.), in a renewable way (that is, for nature to be able to regenerate and continue to produce at the same rate). Both biocapacity and ecological footprint are measured in global hectares, gha, a common unit that comprises the average productivity of all biologically productive land and sea on the planet in a given year.

It has been calculated that, in order to strike a balance between the productive capacity of the planet and the needs of its inhabitants, the environmental footprint for every human being on Earth should not exceed 1.8 gha, which occurs in only a few, extremely poor countries, mainly in Africa and Asia. But globally, the average environmental footprint per capita in 2010 was about 2.2 gha. Based on these figures, we estimate that the current needs of the world population in productive land are 18 billion gha. But our planet, unfortunately, has only 12 billion gha! This difference

represents in quantitative terms the "environmental problem" of our time and the impasse to which it leads if no action is taken.



Picture .4.1: Evolution of Greece's per capita biological capacity and environmental footprint from 1961 to 2011, in gha

The above definition, although scientifically more accurate, is not the only one found in literature. Often, a more abstract version of the term is used, according to which the environmental footprint refers to specific activities and represents the totality of the effects they have on the environment. For example, the environmental footprint of construction activity in a place includes the effects of receiving construction materials from quarries, energy consumption for the production of structural elements (eg windows), pollution from construction machinery, pollution from disposal of debris etc.

The issue of climate change in no way leaves Greek and especially manufacturing companies indifferent. Of course, we must recognize that the issue of climate change adaptation is long-term. However, the benefit, both at the national economy and at company level, is clearly greater than the corresponding adjustment costs. It is precisely in the context of the strategic response of manufacturing companies to climate change that the following two factors play a very important role:

1. Reducing the operating costs of companies, with particular emphasis on reducing energy costs and the use of renewable energy sources, and,
2. Reducing greenhouse gas emissions from the industry

Let us focus on the second factor, namely the reduction of greenhouse gas emissions. Firstly, I should note that the environmental footprint is an important factor in enhancing the competitiveness of a manufacturing company in international markets.

Reducing the environmental footprint, as a process of adaptation to climate change, is a "horizontal technology" of high priority for the majority of manufacturing companies. This action is considered extremely crucial in the effort of companies to open new markets, since demanding foreign markets such as the United States and the United Kingdom, require companies that sell their products in these markets to have a certificate estimating the carbon footprint.

It is thus understood that these specific countries set artificial entry barriers for products such as - for example - food, which are a key part of Greek exports, imposing an indirect protectionism for domestically produced products respectively / in the specific countries.

The environmental footprint can obviously refer to different environmental impacts (eg carbon dioxide emissions, drinking water consumption, etc.) and be direct, ie it results directly from the operation of the business (for example carbon dioxide emitted by the operation of a company's factory) or indirect, ie it arises from third party resources used by the company.

In any case, nowadays, carbon footprint measurement (CO₂) - and in particular carbon dioxide equivalent (CO₂e) emissions measurement - has been accepted as the global unit for measuring global warming and it summarizes all the individual gases associated with the greenhouse effect.

An attempt should be made to measure the carbon footprint in whole value-added chains so that there is a holistic approach to measuring and reducing the carbon footprint.

In any case, the current bad economic situation is obviously creating obstacles for the provision of sufficient funds which with proper use will contribute in the context of the mitigation policy and adaptation of our country and businesses to what should be done to address climate change.

However, any policy package that will apply from now on, on this issue, should be seen and used as an opportunity for the development of new activities, and therefore development, thus contributing to the exit from the economic crisis and the formation of the new development model for Greece.

Therefore, the ecological footprint described below is a resource management tool, which measures the impact of human activities on the natural environment and in extension can measure the environmental impact of various products. This tool assesses the productive area needed by an individual, a product or a total population, to meet its needs for consumption and absorption of generated waste. Thus, the ecological footprint can be measured (quantified) in "surface units" per inhabitant. A "surface unit" is a productive hectare. Consequently, the ecological footprint is expressed in hectares per inhabitant (ha / resident), when the relevant measurement is made at national level, and in global hectares (gha / resident), when the specific measurement is converted, through various factors, in global level.

In the assessment of the ecological footprint, five (5) large categories of consumer products are taken into account: food, housing, transport, forests and services. The annual consumption of these categories, including waste and water disposal, allows us to know, thanks to specific factors, the corresponding area. There are many different conversion rates of energy consumed into an ecological footprint.

Thus, the ecological footprint can be considered as an indicator that allows the accumulation of different quantities in a result and their comparison with different programs and actions, while it should be noted that it does not take into account certain influences, such as biodiversity degradation, which can be calculated from other measurements and can be included in the final result, under certain conditions. It is well known that the first attempt to approach the ecological footprint (Ecological Footprint - EF) was made in the early 1990s.

Subsection 1.3. Green Marketing

The idea of environmental protection first appeared in the mid-1960s in the United States. This movement led to the creation of the Council on Environmental Quality, the Department of Environmental Protection, and the creation of many environmental laws during the 1970s. All of the above have resulted in the US becoming a pioneer in environmental reform since it was the first to show the necessary interest and sensitivity. Green marketing began in the late 1980s and early 1990s.

The second attempt to reconcile the public with the idea of green marketing began in the late 1990s, much more organized and with more positive results. These efforts led to the creation of a global "green" movement, which exists up to this day. Society, citizens, social groups and businesses have begun to increasingly consider the impact and issues of the environment and to prioritize their actions in order to find a solution to this problem. But we must not forget the Kyoto Protocol, which entered into force on 16 February 2005. This Protocol is an agreement between 183 countries, including Greece, which aims to reduce the harmful pollutants that contribute to its creation of the ozone hole, to a point that these pollutants are environmentally sustainable. Through various processes and mechanisms, each of the 183 countries must control and ultimately reduce as many environmental pollutants as possible. Since 2005, Europe has reduced its total emissions by 8%, the US by 7%, Japan by 6% and Russia by 0%.

Throughout this process of change and adaptation to the new conditions, Greece followed a slow but steady pace. During 1980, when the first wave of "green marketing" struck, Greece was practically uninvolved and did not take any action as any move in this direction was considered out of fashion and unworthy of attention. So when the second wave struck, Greece began to read the signs of environmental catastrophe, resulting in immediate mobilization on its part in this global movement. This happened because several important multinational companies operating in the country passed on to the local community the principles and values of green entrepreneurship, ecology and the green mentality in general.

This tendency in mobility and this immediate response in Europe, especially in the business sector, is the central theme of the present work. The ways and methodology used have been observed in other surveys of foreign companies.

Ecology, ecological consciousness and green development are ideas that must be analyzed and assimilated by all ordinary citizens, especially in the business sector, which plays an important role in the daily life of consumers in a society.

According to the American Marketing Association, "green marketing" is the marketing that designs and creates environmentally safe products. Green marketing includes a series of actions based on the following steps: product design, alternative production line, environmentally friendly package and of course the re-evaluation of the advertising process. There is no single definition for green marketing because it simply could not contain all the elements that surround it.

You will surely wonder how marketing and ecology can coexist as one, since the first one pushes you to consume more and more every day while the other less. These two elements can work together in such a way that they do not constantly contradict each other. Marketing contributes to the creation of trends that will include ecology and ecological awareness. Everyday life has reached such a point that it is necessary for everyone to follow these trends, without exception.

We mentioned the word "sustainability" above. Sustainability is more than just an idea that includes goals and guidelines that do not run counter to economic development. It is a step closer to the rationale and trends promoted by modern marketing. Everything related to growth, modernization and sustainability contributes to the direction set by green marketing and has a longer lifespan.

"Green marketing practices create opportunities to engage people and promote a green lifestyle. On the other hand, there is also an air of innovation in how businesses operate and how they simultaneously achieve the goals they have set while building relationships of trust with their customers. " - (Grant J. 2007, p.11)

In Sweden, the car company Volvo has developed a sustainable environment with renewable energy resources, replacing natural gas with biogas to heat the plant. Following an agreement with VattenfallAB (Swedish company as well), Volvo was able to find a reliable energy supplier for its production line. In addition, the company renewed its policy, so that all products and services it produces, as well as the operating modes of their offices and factories, are environmentally oriented. (volvocars.com)

The electronics company Sony, one week before Christmas 2001, had a terrible nightmare. The Dutch government has banned the import of 1.5 million pieces of the Playstation console destined for Europe. The reason; The whole production had a small amount of cadmium in its cables. With very quick moves the company tried to remove those harmful cables from almost all of its products. But the cost for Sony was double, as not only it had to spend \$ 130 million to replace the consoles but also lost its credibility and prestige towards the consumers.

From then on, the company's executives radically changed their strategy and decided to pursue stricter policies regarding the protection of the environment. The moral of this story is that even giant companies like Sony will be severely affected if they ignore the smallest detail. Ecology, ecological consciousness and green development are concepts that we must all consider as active members of a society.

From the above case, three conclusions can be drawn:

- Even the best companies can make mistakes and/or ignore important environmental safety issues.
- Protecting the environment and citizens is not a negligible issue in the business world.
- Can any company gain enough privileges from "green" entrepreneurship? Enough to see some processes from a renewed perspective.

It is necessary for companies to have constant access and knowledge of the latest and most attractive market trends. Such trends are discovered by continuous research on consumer buying behavior. After all, the products and services provided by companies follow the trends. Today's consumers are more concerned about the destruction of the environment and the negative consequences in the long run, than about the products they consume. For this reason, companies meet the demands of their consumers by using "green" promotion and production strategies, while at the same time gaining ground over their competitors but also a larger, more satisfied, and loyal customer base. The idea of green marketing pushes businesses to follow renewed ecological practices when dealing with consumers, traders, suppliers and employees. Until today, the percentage of companies that appear to be "environmentally friendly" is growing rapidly.

According to Michael J. Polonsky, environmental marketing has been perceived by a variety of companies as an opportunity to achieve their goals. It is generally accepted that companies have a moral obligation to serve society in more environmentally friendly ways. One of the factors influencing the purchase of ecological products is the difference in price compared to traditional products on the market. The prices of these products can be adjusted with carefully designed strategies and standards.

Summary of Educational Unit 1

In this unit concepts supporting ECOFRIENDLY BUSSINES were mentioned and analyzed. Specifically, we have seen that biodiversity is defined as the diversity of life in all its forms (plants, animals, fungi, etc.) and at all levels of its organization (genes, organisms, ecosystems). It includes the way of expressing or estimating diversity that exists in the various levels of organization of life. It reflects the number, variety and variability of living organisms and the systems that make them up. Biodiversity has social, economic and ecological benefits.

We have also seen that an ecosystem is a dynamic complex of communities of plants, animals and microorganisms, as well as elements of their abiotic environment that interact as a functional unit.

Sustainable use means the use of components of biological diversity, in a manner and proportion so that it does not cause long-term limitations to biological diversity.

The environmental footprint is a way of measuring the effects that human activities have on Earth.

According to the American Marketing Association, "green marketing" is the marketing that designs and creates environmentally friendly products.

Self-assessment Questions – Educational Unit 1

1. At what levels is biodiversity considered:

- A) Genetic diversity
- B) Diversity of species
- C) Diversity of ecosystems
- D) All of the above

2. The term "ecosystem" includes only elements of the abiotic environment.

- True ● False

3. What are the key components of an ecosystem?

- A) Biotic components
- B) Abiotic components
- C) Interactions within and between the above two components
- D) All of the above
- E) A and B.

4. Sustainable use means the use of components of biological diversity, in a manner and proportion that it does not cause long-term limitations to biological diversity.

- True ● False

5. Biodiversity:

- A) Is vital to our health
- B) Improves the quality of life
- C) Contributes to social well-being
- D) A & B

E) A & B & C

6. Our country is NOT particularly gifted, in comparison to the other countries of the European Union, in terms of biodiversity.

● True ● False

7. Services provided by natural ecosystems are classified as:

A) Productive, regulatory, social, judicial

B) Productive, regulatory, social, political

C) Productive, regulatory, protective, intellectual

D) Productive, regulatory, social, intellectual

8. The environmental footprint is a way to measure the effects that human activities have on Earth.

● True ● False

9. The unit of measurement of the ecological footprint is

A) 1 Kg / He

B) 1 lt / He

C) 1 He / resident

D) 1 atm / He

10. The environmental footprint plays an important role in enhancing the competitiveness of a manufacturing company in international markets.

● True ● False

11. In the assessment of the ecological footprint, five (5) major categories of consumer products are taken into account: food, housing, transport, forests and services.

- True ● False

12. According to the American Marketing Association, "green marketing" is the marketing that designs and creates environmentally safe products.

- True ● False

ANNEX - UNIT 1

Answers to the Self-assessment Questions

1. D) All of the above
2. False
3. D) All of the above
4. True
5. E) A & B & C
6. False
7. C) productive, regulatory, protective, intellectual
8. True
9. C) 1 He/resident
10. True
11. True
12. True

Sustainable use means the use of components of biological diversity, in a manner and proportion that it does not cause long-term limitations to biological diversity. (True)

Biodiversity is necessary to sustain life on Earth. (True)

Our country is NOT particularly gifted, in relation to the other countries of the European Union, in terms of biodiversity. (False)

Environmental footprint is a way to measure the effects that human activities have on Earth. (True)

The unit of measurement of the ecological footprint is 1 Kg / He. (False)

The environmental footprint plays an important role in enhancing the competitiveness of a manufacturing company in international markets. (True)

In the assessment of the ecological footprint, five (5) large categories of consumer products are taken into account: food, housing, transport, forests and services. (True)

According to the American Marketing Association, "green marketing" is the marketing that designs and creates environmentally safe products. (True)

Unit 2: What is ECOFRIENDLY? Current situation in the EU

Purpose

The purpose of this training unit is to inform and explain to the trainees what Eco-friendly Business means while at the same time present in detail the current situation in the European Union regarding this field.

Expected results

Upon completion of the training unit the trainees will know:

- What an Eco-friendly Business is
- What a circular economy is and what are its prospects
- What the biodiversity strategy is and how it is related to the restoration of nature in our lives

Key concepts

- Eco-friendly Business
- Circular economy

Subsection 2.1. Eco-friendly Business

In recent years, terms such as "green" and "environmentally friendly", have become very popular in shows, advertisements and product packaging. The term "environmentally friendly" has been used for so many products and practices, that its meaning is in danger of being lost. By understanding the true meaning of "environmentally friendly", we can apply practices that will lead to a healthier life for the planet and its inhabitants, both young and old.

Definition

Eco-friendly literally means earth-friendly or not harmful for the environment. This term usually refers to products that contribute to green living or to practices that help preserving resources such as water and energy. Eco-friendly products also prevent air,

water and soil pollution. They can engage in environmentally friendly habits or practices with a greater awareness of how to use resources.

Product qualifications

The construction of a truly environmentally friendly product keeps in mind both environmental and human safety. At least the product is non-toxic. Other environmentally friendly features include the use of sustainable cultivated or augmented ingredients, produced in ways that do not damage the ecosystem. Organic ingredients or materials are grown without toxic pesticides or herbicides. "Recycled" products contain glass, wood, metal or plastic that is recovered from waste and made into something new. Biodegradable products are broken down by natural decomposition, which puts less on landfills and the ecosystem as a whole.

With this as a given, in a relevant Eurobarometer survey, 94% of citizens in all EU Member States state that environmental protection is important to them. In addition, 91% of citizens said that climate change is a serious problem in the EU. European legislation must necessarily protect the environment, according to 83% of respondents.

The Eurobarometer research shows that citizens want more to be done to protect the environment, and that they believe that large companies and industries, national governments and the EU, as well as the citizens, are responsible for that. Citizens asked believe that the most effective way to deal with environmental problems is to "change the way we consume" and "change the way we produce and conduct our business".

The Commissioner for the Environment, Oceans and Fisheries, Virginijus Sinkevicius, said: "We are not surprised by the results of this research. These are precisely the concerns of the citizens to which we want to respond with the European Green Deal. It is encouraging to see that there is support for the fundamental changes we are going to make in our society and our economy, and that people want to play an important role in this change."

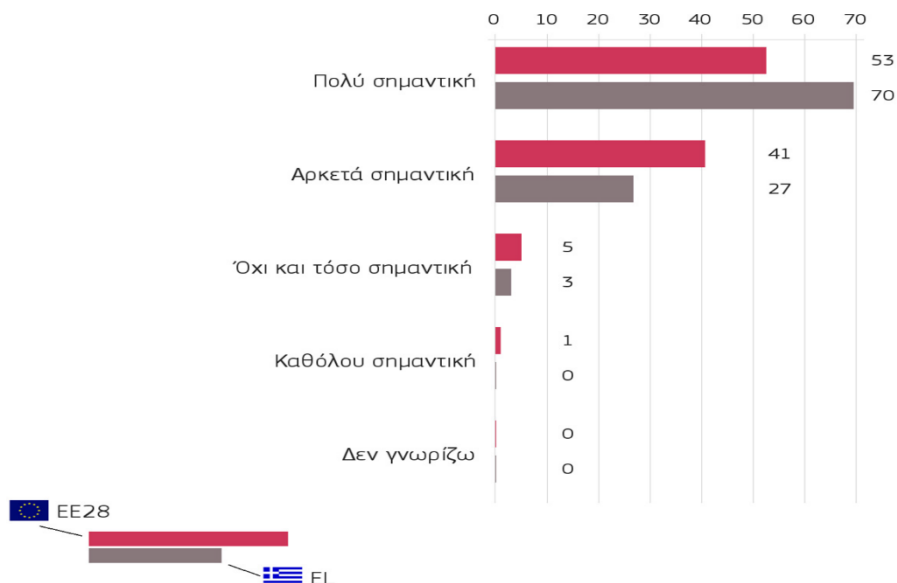
Climate change, air pollution and waste are the three most important environmental issues, according to the research findings. More than three quarters (78%) of respondents believe that environmental issues have a direct impact on their daily lives and health. More than eight in ten people are concerned about the effects of chemicals on everyday products.

Citizens recognize that fundamental change may be needed. From the answers given by more than 27,000 respondents, there is firm support for all the proposed measures aimed at reducing plastic waste and waste generation. The findings also show that citizens believe that products should be designed to facilitate the recycling of plastics, industry and retailers should make efforts to reduce plastic packaging, individuals should be trained in ways to reduce plastic waste, and local authorities should provide more and better collection facilities for plastic waste.

The research also examined attitudes towards the clothing industry and found high levels of concern about environmental issues and working conditions. Respondents express a desire for longer-lasting clothing made from recyclable materials.

Finally, support was expressed for other measures, such as investment in research and development, better information and education, encouraging businesses to engage in sustainable activities and stricter legislative control.

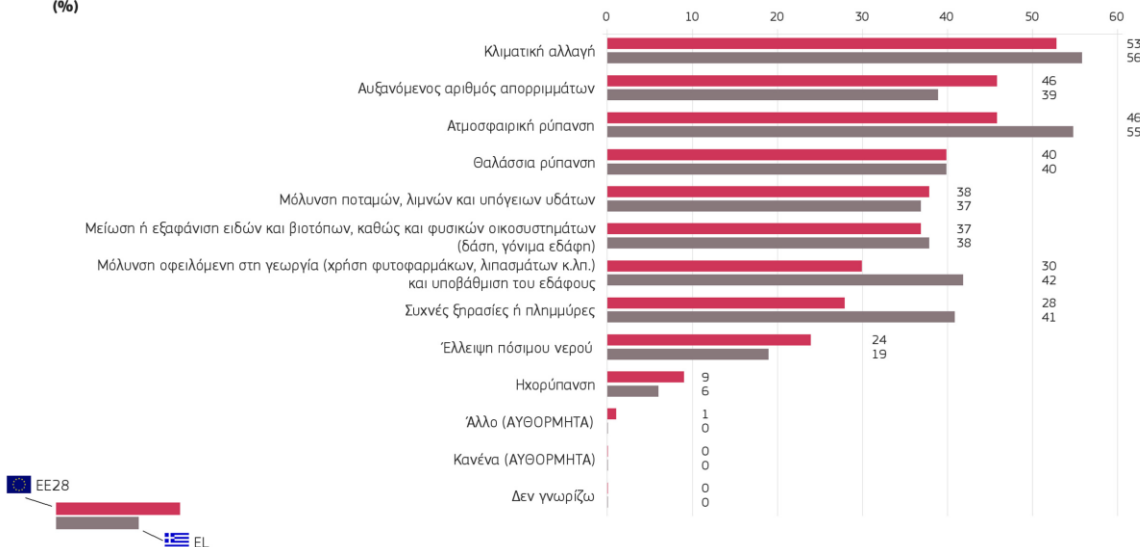
QA1 Πόσο σημαντική είναι για εσάς προσωπικά η προστασία του περιβάλλοντος; (%)



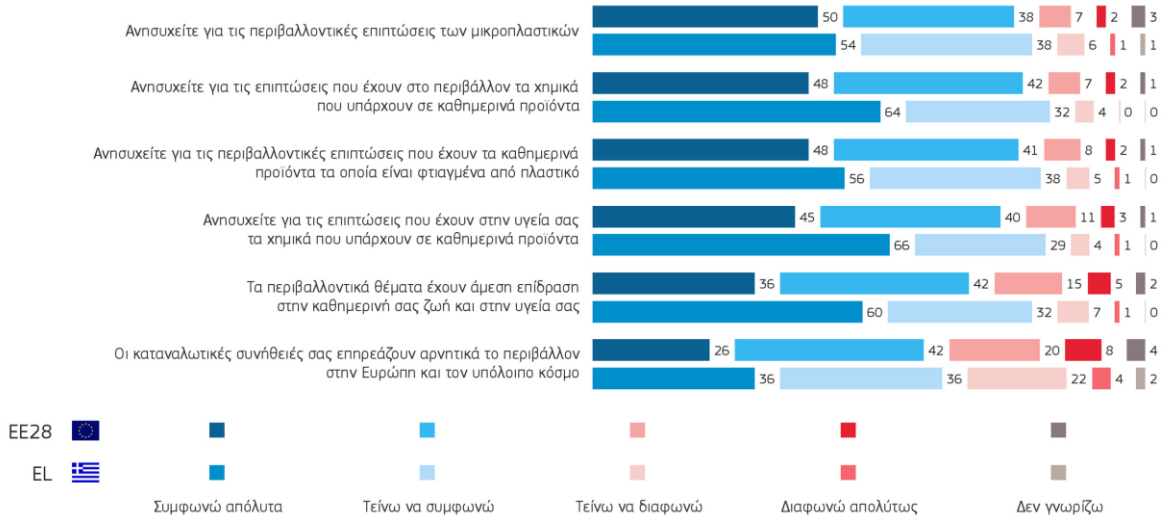
QA4 Ποιες είναι οι τρεις κύριες πηγές ενημέρωσής σας για το περιβάλλον; (ΜΕΧΡΙ 3 ΑΠΑΝΤΗΣΕΙΣ) (%)



QA3 Από την ακόλουθη λίστα, επιλέξτε τα τέσσερα περιβαλλοντικά θέματα που θεωρείτε ότι είναι τα σημαντικότερα. (ΜΕΧΡΙ 4 ΑΠΑΝΤΗΣΕΙΣ) (%)



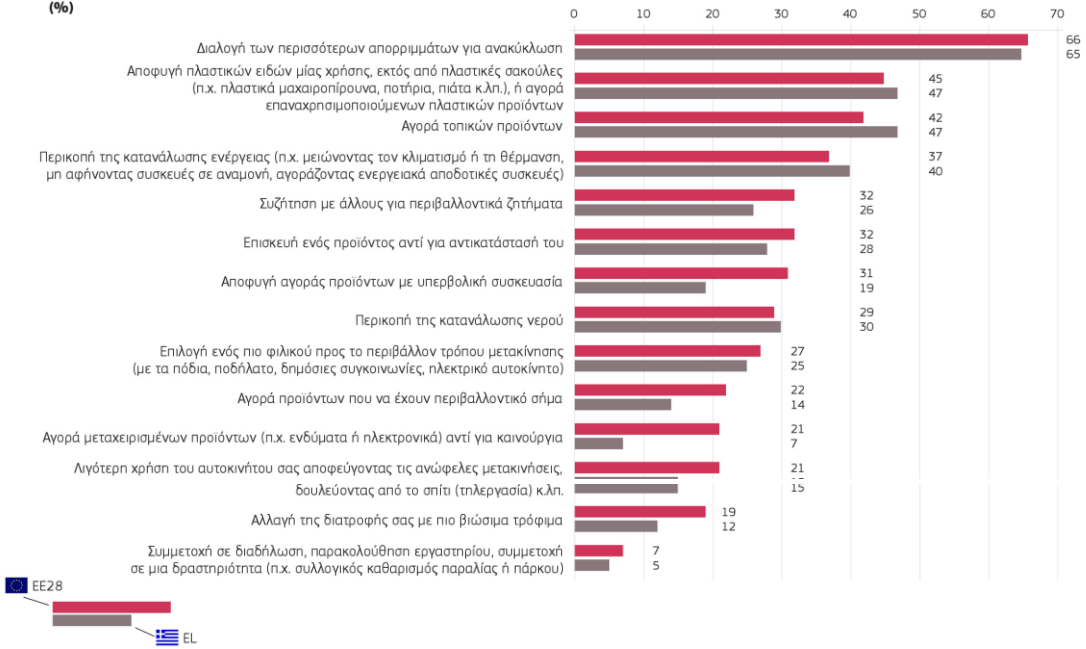
QA7 Παρακαλώ πείτε μου σε ποιο βαθμό συμφωνείτε ή διαφωνείτε με καθεμία από τις ακόλουθες δηλώσεις. (%)



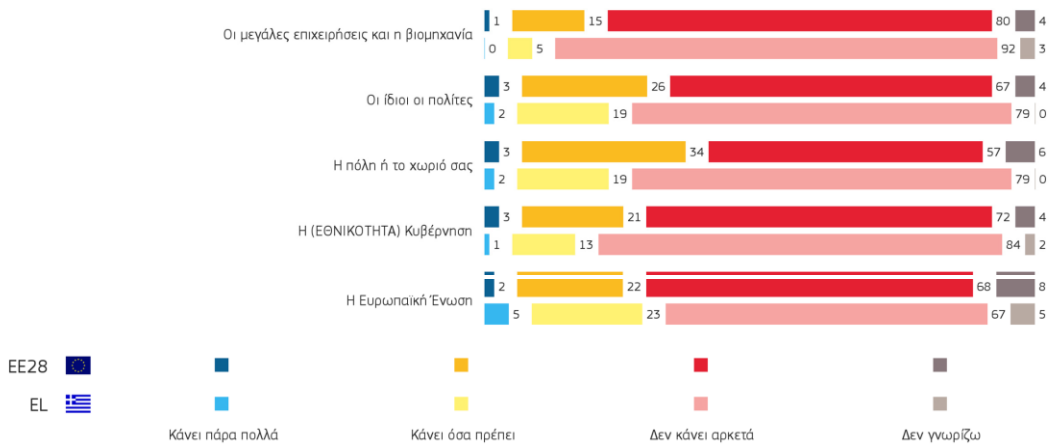
QA10 Κατά τη γνώμη σας, ποιοι από τους παρακάτω θα ήταν οι πιο αποτελεσματικοί τρόποι αντιμετώπισης των περιβαλλοντικών προβλημάτων; (ΜΕΧΡΙ 3 ΑΠΑΝΤΗΣΕΙΣ) (%)



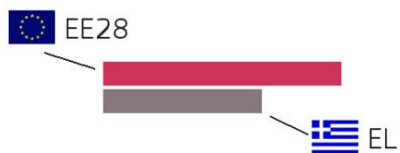
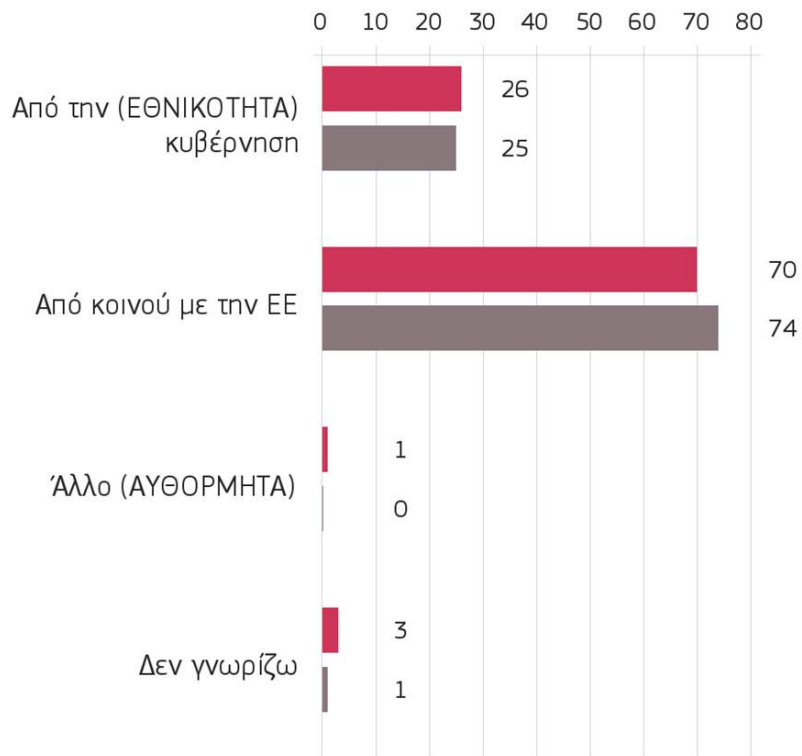
QA6 Έχετε κάνει κάτι από τα ακόλουθα τους τελευταίους 6 μήνες; (ΠΙΘΑΝΗ ΠΟΛΛΑΠΛΗ ΑΠΑΝΤΗΣΗ)
 (%)



QA9 Κατά τη γνώμη σας, κάθε ένας από τους παρακάτω παράγοντες κάνει επί του παρόντος πάρα πολλά, περίπου όσα πρέπει ή όχι αρκετά για την προστασία του περιβάλλοντος;
 (%)

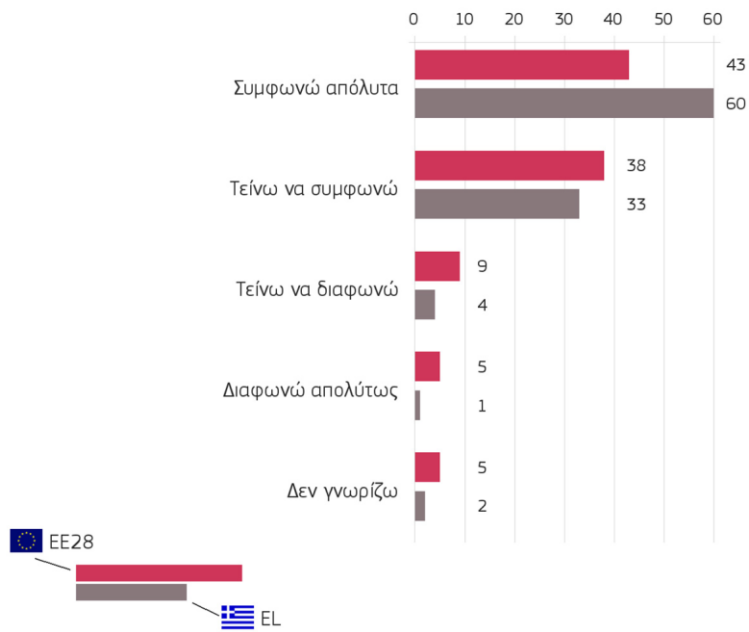


Q8 Σε ό,τι αφορά την προστασία του περιβάλλοντος, πιστεύετε ότι οι αποφάσεις θα πρέπει να λαμβάνονται από την (ΕΘΝΙΚΟΤΗΤΑ) κυβέρνηση ή από κοινού με την ΕΕ;
(%)



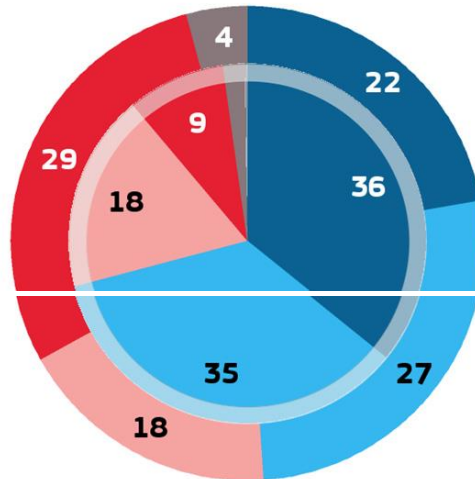
QA11.2 Παρακαλώ πείτε μου σε ποιο βαθμό συμφωνείτε ή διαφωνείτε με καθεμία από τις ακόλουθες δηλώσεις.

Η ΕΕ θα πρέπει να βοηθήσει τις εκτός ΕΕ χώρες να βελτιώσουν τα περιβαλλοντικά τους πρότυπα (%)




QA13.6 Πείτε μου σε ποιο βαθμό συμφωνείτε ή διαφωνείτε με κάθε μία από τις ακόλουθες δηλώσεις που σχετίζονται με περιβαλλοντικά προβλήματα και συνθήκες εργασίας που συνδέονται με ενδύματα.

Τα ενδύματα θα πρέπει να είναι διαθέσιμα στη χαμηλότερη δυνατή τιμή, ανεξάρτητα από το περιβάλλον ή τις συνθήκες εργασίας υπό τις οποίες κατασκευάστηκαν (%)








- Συμφωνώ απόλυτα
- Τείνω να συμφωνώ
- Τείνω να διαφωνώ
- Διαφωνώ απολύτως
- Δεν γνωρίζω

EE28  Εξωτερικό κυκλικό διάγραμμα

EL  Εσωτερικό κυκλικό διάγραμμα

QA13.6 Πείτε μου σε ποιο βαθμό συμφωνείτε ή διαφωνείτε με κάθε μία από τις ακόλουθες δηλώσεις που σχετίζονται με περιβαλλοντικά προβλήματα και συνθήκες εργασίας που συνδέονται με ενδύματα.

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Απάντησή: Σύνολο 'Συμφωνώ'	 ΕΕ28	 EL
ΣΥΝΟΛΟ	49	71
 Ηλικία		
15-24	50	67
25-39	50	75
40-54	47	68
55+	47	73
 Εκπαίδευση (Ολοκλήρωση)		
15-	55	75
16-19	54	70
20+	38	70
Ακόμα σπουδάζει	47	74
 Δυσκολίες πληρωμής λογαριασμών		
Τις περισσότερες φορές	60	71
Μερικές φορές	61	72
Σχεδόν ποτέ/ Ποτέ	43	67

Κοινωνικοδημογραφική κατανομή

Subsection 2.2 Circular Economy

There is only one planet Earth, however, by 2050 people will be consuming as if there were three planets. Global consumption of materials such as biomass, fossil fuels, metals and minerals is expected to double over the next 40 years, with annual waste production projected to increase by 70% by 2050.

Given that 50% of total greenhouse gas emissions and more than 90% of biodiversity loss and pressure from water resources are due to resource extraction and processing, the European Green Deal has launched a coordinated strategy for a climate-neutral approach, resource efficient and competitive economy. Upgrading the cyclical economy from the pioneers to key economic players will make a decisive contribution

to achieving climate neutrality by 2050 and decoupling growth from resource use, while ensuring the EU's long-term competitiveness without leaving anyone behind.

In order to fulfill this ambition, the EU must accelerate the transition to a model of regenerative development that returns more to the planet than it takes away from it, move towards maintaining resource consumption within planetary limits and, therefore, make efforts to reduce the consumption footprint and double the rate of use of circular materials over the next decade.

As far as businesses are concerned, working together to create a framework for sustainable products will offer new opportunities inside and outside the EU. This progressive but irreversible transition to a sustainable economic system is an integral part of the EU 's new industrial strategy. According to a recent study, the application of the principles of the circular economy in the EU economy provides the possibility of increasing the EU GDP by an additional 0.5% by 2030, creating about 700,000 new jobs. There is clear business interest in individual businesses as well: as manufacturing companies in the EU spend on average around 40% on materials, closed-loop models can increase their profitability by protecting them from resource price fluctuations.

The circular economy - by taking advantage of the single market and the potential of digital technologies - can strengthen the EU industrial base and promote creation and entrepreneurship among SMEs. Innovative models based on developing a closer relationship with consumers, mass adaptation to customer needs, sharing economy and collaborative economy, enhanced by digital technologies such as the Internet of Things, mass data, the chain Arrays and artificial intelligence, will accelerate not only the cyclicity but also the dematerialization of our economy, reducing Europe's dependence on raw materials.

In terms of citizens, the circular economy will provide functional, safe and high quality products that are cost-effective and affordable, last longer and are designed for reuse, repair and high quality recycling. A whole new set of sustainable services, product models as a service and digital solutions will create better quality of life, innovative jobs and upgraded knowledge and skills.

The circular economy provides a future-oriented agenda for achieving a cleaner and more competitive Europe, in cooperation with economic actors, consumers, citizens and civil society organizations. The aim is to accelerate the transformational change required under the European Green Deal, while taking advantage of the circular economy actions implemented after 2015. This will ensure, on the one hand, the optimization of the regulatory framework to make it suitable for a sustainable future, and, on the other hand, the maximization of the new opportunities that will arise from the transition, while minimizing the burden on citizens and businesses.

The plan presents a set of interrelated initiatives to establish a strong and coherent policy framework that will make sustainable products, sustainable services and sustainable business models a common practice and transform consumer standards so that waste is not generated from the beginning. This policy framework will be implemented gradually, while value chains will be addressed as a matter of priority. Further measures will be taken to reduce waste and ensure that the EU has a smooth internal market for high quality secondary raw materials. The EU's ability to take responsibility for its waste will also be strengthened.

Europe will not achieve transformational change on its own. The EU will continue to show the way to a global cyclical economy and will use its influence, expertise and financial resources to achieve the 2030 Sustainable Development Goals. It also aims to ensure that cyclical economy works for citizens, regions and cities, fully contributes to climate neutrality and offers opportunities for research, innovation and digitization. It envisages actions for the further development of a strong monitoring framework, which will contribute to the measurement of prosperity beyond GDP.

Design of sustainable products

Although up to 80% of the environmental impact of products is determined at the design stage, the linear "purchase-production-use-disposal" model does not provide producers with sufficient incentives to make their products more cyclical. Many products fail too quickly, they cannot be easily reused, repaired or recycled, and many are for single use only. At the same time, the single market provides the EU with a

critical mass enabling it to set global standards in product sustainability and to influence product design and value chain management globally.

Some EU initiatives and legislation already cover, to some extent, aspects of product sustainability, on a mandatory or optional basis. In particular, the European Ecodesign Directive successfully regulates energy efficiency and certain cyclic characteristics of energy-related products. At the same time, instruments such as the EU Ecolabel or the EU criteria for green public procurement (GPP) have a wider scope but a reduced impact due to the constraints of optional approaches. In fact, there is no complete set of requirements to ensure that all products placed on the Union's market become more and more sustainable and meet the conditions of circularity.

In order to make products climate-neutral, resource-efficient and cyclically economical, to reduce waste and to ensure that pioneering performance in sustainability is progressively common practice, the Commission will present a legislative initiative for a sustainable product policy.

At the heart of this legislative initiative will be the extension of the Ecodesign Directive beyond energy-related products, so that the Ecodesign Framework can be applied to as wide a range of products as possible and meet the requirements of circularity.

The Commission, as part of the legislative initiative and, where appropriate, through complementary legislative proposals, will consider establishing sustainability principles and other appropriate ways of regulating the following aspects:

- Improving durability, reusability, upgradeability and repairability, examining the presence of hazardous chemicals in products and increasing energy efficiency and resource efficiency
- Increasing the recycled content of products, while ensuring their performance and safety
- Creating the possibility of reconstruction and high quality recycling
- Reducing the carbon footprint and environmental footprint

- Limiting disposable products and addressing early depreciation
- Imposing a ban on the destruction of unsold durable goods
- Encouraging the "product as a service" model or other models in which producers retain ownership of the product or responsibility for its performance over its life cycle
- Mobilizing the opportunities offered by the digitization of product information, including solutions such as digital passports, labeling and stamps
- Rewarding products based on their different sustainable performance, including linking high performance levels to incentives.

Priority will be given to examining product groups from all the value chains presented in this action plan, such as electronics, ICT and textiles, as well as high-impact furniture and intermediates such as steel, cement and chemicals. Further groups will be identified based on their environmental impact and cyclical potential.

This legislative proposal and any other complementary regulatory or optional approach will be developed in a way that improves coherence with existing means of regulating products at different stages of their life cycle. The Commission intends in the future for the wider policy and legislative developments to be governed by the principles of product sustainability. The Commission will also improve the effectiveness of the current framework for the ecodesign of energy-related products, including through the rapid adoption and implementation of a new work program on ecodesign and energy labeling for the period 2020-2024 with regard to individual product groups.

The revision of the Ecodesign Directive as well as further work on specific product groups, in the context of ecodesign or other instruments, will use, where appropriate, criteria and rules established under the EU Ecolabel Regulation, the environmental product footprint approach and the EU criteria for green public procurement (GPP). The Commission will consider introducing mandatory requirements for sustainability of not only goods but also services. Consideration will also be given to establishing requirements related to the environmental and social aspects of the value chain, from

production and use to the end-of-life of the product, including WTO rules. For example, ensuring accessibility to certain products and services, in addition to contributing to social inclusion, can have additional benefits, as it increases the durability and reusability of the product.

In addition, to support the effective and efficient implementation of the new Sustainable Product Policy Framework, the Commission will take the following steps:

- Establish a common European data area for smart circular applications, with data on value chains and product information;
- Strengthen efforts, in cooperation with national authorities, to enforce applicable sustainability requirements for products placed on the Union market, in particular through coordinated controls and market surveillance actions.

Empowerment of consumers and buyers in the public sector

Empowering consumers and providing them with cost-saving opportunities is a key structural element of the sustainable product policy framework. To enhance consumer participation in the circular economy, the Commission will propose to review EU consumer legislation so that consumers receive reliable and relevant information on products at the point of sale, including their lifespan and availability of repair services, spare parts and repair manuals. The Commission will also consider further strengthening consumer protection against pseudo-green identity and early devaluation, and establishing minimum requirements for sustainability labels / logos and information tools.

In this regard, the Commission will also work towards the introduction of a new "right of repair" and consider new horizontal substantive rights for consumers, for example, in the case of spare parts or access to repair services and, in the case of ICT and of electronic products, in upgrade services. Regarding the role of guarantees in the availability of more circular products, the Commission will explore what changes are possible.

The Commission will also suggest that companies justify their environmental claims using environmental footprinting methods for products and organizations. The Commission will test the integration of these methods into the EU eco-label and more systematically include durability, recyclability and recycled material in the EU eco-label criteria.

The purchasing power of public authorities represents 14% of EU GDP, and can significantly stimulate demand for sustainable products. To make use of this potential, the Commission will propose minimum mandatory criteria for green public procurement (GPP) and targets in union legislation, and will gradually implement mandatory reporting to monitor the utilization of green public procurement, without creating an unjustified administrative burden for buyers who are public bodies. In addition, the Commission will continue to support capacity building, by guiding, training and disseminating good practice, and encouraging public purchasers to participate in the Public Buyers for Climate and Environment initiative, which will facilitate the exchange of information between buyers committed to implement the GPP.

Circularity in production methods

Circularity is an essential part of a broader transformation of industry towards climate neutrality and long-term competitiveness. It can offer significant material savings across all value chains and production methods, it can generate added value and reveal financial opportunities. The Commission, along with the objectives set out in the Industrial Strategy, will increase cyclicity in industry in the following ways:

- by evaluating options for further promoting the cyclicity of industrial production methods in the context of the review of the Industrial Emissions Directive, including the integration of circular economy practices into the forthcoming best practice reference documents,
- by facilitating industrial coexistence through the development of an industry-led reporting and certification system and by taking measures to enable industrial coexistence to take place,
- by supporting the sustainable and cyclical bio-products sector through the implementation of the bio-economy action plan,
- by promoting the use of digital technologies for tracking, locating and mapping resources,
- by promoting the utilization of ecological technologies through a system of reliable verification, by registering the EU environmental technology verification system as a Union certification label.

The new strategy for SMEs will strengthen cyclical industrial cooperation between SMEs, utilizing training, consulting within the "Enterprise Europe Network" on the creation of cooperatives, as well as transferring knowledge through the European Resource Efficiency Knowledge Centre.

VALUE CHAINS OF BASIC PRODUCTS

The challenge for sustainability of key value chains requires immediate, integrated and coordinated action, which will be an integral part of the sustainable product policy

framework. These actions will help tackle climate emergencies and feed into the EU's industrial strategy, as well as the forthcoming Biodiversity Strategy, the “Farm to Plate” Strategy and the Forestry Strategy. In the context of the management of sectoral actions, the Commission will work closely with stakeholders on key value chains to identify barriers to the expansion of circular product markets and how to address these barriers.

Electronic products and ICT

Electrical and electronic equipment is still one of the fastest growing waste flows in the EU, with current annual growth rates of 2%. It is estimated that less than 40% of electronic waste is collected and recycled in the EU. There is a loss of value when fully or partially functional products are discarded because they cannot be repaired, the battery cannot be replaced, the software is no longer supported, or when the materials embedded in these devices are not recovered. Nearly two-thirds of Europeans would like to continue using their digital devices for a longer period of time, provided their performance is not significantly affected.

To address these challenges, the Commission will present an "electronic product circularity initiative" to mobilize existing and new media. Under the new Sustainable Product Policy Framework, this initiative will promote the extension of product life and will include, inter alia, the following actions:

- Regulatory measures for electronic products and ICT such as mobile phones, tablets and laptops, in accordance with the Ecodesign Directive, so that these devices are designed with energy efficiency and durability in mind, repairability, upgradeability, maintenance, reutilization and recycling. Further details on this issue will be provided in the forthcoming Ecodesign Working Plan. Printers and consumables such as printer inks will also be covered, unless the sector reaches an ambitious optional agreement within the next six months.
- Focus on electronic products and ICT as a priority area for the implementation of the "right to repair", including the right to update outdated software.

- Regulatory measures for mobile phone and similar device chargers, including the introduction of a common charger, improved charging cable durability, and initiatives to disconnect the charger market from the market for new devices
- Improving the collection and treatment of electrical and electronic equipment waste, including by exploring options for a system for returning or reselling old mobile phones, tablets and chargers at EU level
- Reviewing EU rules on restrictions on hazardous substances in electrical and electronic equipment and provide guidelines for improving coherence with relevant legislation.

Electric batteries and vehicles

The future of transportation is based on sustainable electric batteries and sustainable vehicles. In order to make rapid progress in improving the sustainability of the emerging value chain of batteries for electromobility and to strengthen the cyclical ability of all electric batteries, the Commission will propose a new regulatory framework for electric batteries this year. This legislative proposal will make use of the evaluation of the Battery Directive, taking into account the following elements:

- recycled content rules and measures to improve collection and recycling rates of all electrical batteries, to ensure the recovery of valuable materials and to provide guidance to consumers,
- examination of the issue of non-rechargeable electrical batteries with the aim of phasing out their use in cases where there are other alternatives,
- sustainability and transparency requirements for electrical batteries taking into account, for example, the carbon footprint of the batteries, the ethical supply of raw materials and security of supply, as well as the facilitation of reuse, readjustment and recycling.

The Commission will also propose a revision of the end-of-life vehicle rules in order to promote more cyclical business models by linking design aspects to end-of-life processing, taking into account the mandatory recycled content for specific building

materials, and improve recycling efficiency. In addition, the Commission will consider the most effective measures to ensure the collection and environmentally sound treatment of waste oils.

From a broader perspective, the forthcoming integrated European strategy for sustainable and smart mobility will look at strengthening synergies with the transition to a circular economy, in particular by implementing "product as service" solutions to reduce the consumption of virgin materials, the use of alternative fuels for transport, the optimization of the use of infrastructure and vehicles, the increase of occupancy rates and load rates and the elimination of waste and pollution.

Packaging

The amount of materials used for packaging is constantly increasing, and in 2017 packaging waste in Europe reached an unprecedented level — 173 kg per capita, a level higher than ever. To ensure that all packaging on the EU market is reusable or recyclable in an economically sustainable way by 2030, the Commission will strengthen the mandatory essential packaging requirements for the EU market, and will consider other measures, focusing on in the following:

- reduction of (excessive) packaging and packaging waste, including through the setting of targets and other measures to prevent the generation of waste,
- promotion of packaging reuse and recyclability design, taking into account, inter alia, restrictions on the use of certain packaging materials for specific applications, in particular when alternative reusable products or systems can be used or when consumer goods can be transported safely without packaging,
- consideration of the possibility of reducing the complexity of packaging materials, including the number of materials and polymers used.

As part of the initiative for the harmonization of separate collection systems, the Commission will examine whether labeling to facilitate the separate sorting of packaging waste at source is possible at EU level.

The Commission will also lay down rules for the safe recycling of plastics, other than PET, so that they can be turned into materials that will come in contact with food.

The Commission will also closely monitor and support the implementation of the requirements of the Drinking Water Directive in order to make tap water accessible in public places, so as to reduce dependence on bottled water and prevent the generation of waste packaging.

Plastics

The EU strategy on plastics in the circular economy has led to a comprehensive set of initiatives to address a problem of serious public concern. However, as plastic consumption is expected to double over the next 20 years, the Commission will take further steps to address the sustainability challenges of this widespread material and will continue to promote a coordinated approach to address pollution from plastics worldwide.

In order to increase the utilization of recycled content and to contribute to a more sustainable use of plastics, the Commission will introduce mandatory recycling requirements and waste reduction measures for commodities such as packaging, construction materials and vehicles, also taking into account the activities of the plastics recycling alliance.

In addition to measures to reduce plastic waste, the Commission will examine the presence of microplastics in the environment, taking the following steps:

- Restriction of intentionally added microplastics and control of agglomerates, taking into account the opinion of the European Chemicals Agency,
- Development of labeling, standardization, certification and regulatory measures for the unintentional release of microplastics, including measures to increase the binding of microplastics at all relevant stages of the product life cycle,
- Further development and harmonization of measurement methods for microplastics unintentionally released, in particular from rubbers and fabrics, and providing harmonized data on microplastics concentrations in seawater,

- Eliminating gaps in scientific knowledge about the danger and presence of microplastics in the environment, drinking water and food.

In addition, the Commission will address the emerging sustainability challenges by developing a policy framework on the following issues:

- the supply, labeling and use of plastics of organic origin, based on an assessment of the extent to which the use of raw materials of biological origin entails real environmental benefits, in addition to the reduction in the use of mineral resources,
- the use of biodegradable or compostable plastics, based on an evaluation of the applications in which such use may be beneficial to the environment, and the criteria governing such applications. The aim is to ensure that a product labeled "biodegradable" or "compostable" does not lead consumers to disposal options that cause plastic waste or pollution due to unsuitable environmental conditions or insufficient degradation time.

The Commission will ensure the timely implementation of the new Directive on Disposable Plastics and Fishing Gear in order to tackle the problem of marine pollution from plastic waste, while ensuring a single market, in particular with regard to the following:

- harmonized interpretation of the products covered by the Directive,
- labeling of products such as tobacco, cups and wet wipes, and ensuring the use of bottles with non-removable caps to prevent the generation of waste,
- development, for the first time, of rules for measuring recycled content in products.

Textile products

Textiles are the fourth highest pressure category in terms of raw material and water use, after food, housing and transportation, and the fifth in terms of greenhouse gas emissions. It is estimated that less than 1% of all textiles worldwide are recycled into new textiles. The EU textile industry, which consists mainly of SMEs, has begun to

recover after a long period of restructuring, with 60% of the value of garments sold in the EU being produced in third countries.

Given the complexity of the textile value chain, the Commission will respond to these challenges by proposing an integrated Union strategy for textiles, based on industry and other stakeholder input. The strategy will aim to boost industrial competitiveness and innovation in the sector, boost the EU market for sustainable and cyclical textiles, including the textile reuse market, tackle fast fashion and promote new entrepreneurship. This will be achieved through a comprehensive set of measures which include:

- Implementing the new Sustainable Product Policy Framework in the textile industry, including the development of eco-design measures to ensure that textiles are suitable for cyclicity, by ensuring the utilization of secondary raw materials, combating the presence of hazardous chemicals and encouraging private consumers to choose sustainable textiles and having easy access to reuse and repair services.
- Improving the business and regulatory environment for sustainable and cyclical textiles in the EU, in particular by providing incentives and support for “product-to-service” models, cyclical materials and production methods, and enhancing transparency through international cooperation.
- Providing guidance on achieving high levels of separate collection of textile waste, which Member States must ensure by 2025.
- Strengthening the collection, reusing and recycling of textiles, including through innovation, encouraging industrial implementations and regulatory measures, such as extending producer’s responsibility.

Constructions and buildings

The structured environment significantly affects many sectors of the economy, the local job market and quality of life. It requires huge amounts of resources and represents about 50% of all mined materials. The construction sector accounts for more than 35% of the total waste generation in the EU. Greenhouse gas emissions

from the extraction of materials, the production of construction products and the construction and renovation of buildings are estimated to represent 5-12% of the total national greenhouse gas emissions. Increasing the efficient use of materials can save up to 80% of these emissions.

The Commission will launch a new integrated strategy for a sustainable structured environment to take advantage of the potential to increase material efficiency and reduce climate impact. This strategy will ensure coherence in the respective policy areas, such as climate, energy and resource efficiency, construction and demolition waste management, accessibility, digitization and skills. It will promote the principles of cyclicity throughout the life cycle of buildings, through the following measures:

- Examining the sustainability performance of construction products in the context of the revision of the Construction Products Regulation, including the possible introduction of recycled content requirements for certain construction products, taking into account their safety and functionality.
- Promoting measures to improve the resilience and adaptability of structured assets, in line with the principles of the circular economy for building design and the development of digital registers for buildings.
- Using the Level(s) framework to integrate life cycle assessment into public procurement and the EU Sustainable Finance Framework, and explore the feasibility of setting carbon reduction and storage targets.
- Possibly reviewing the Material Recovery Targets set out in EU legislation on construction and demolition waste and the fractions of each material in them.
- Promoting initiatives to reduce soil sealing, recovering abandoned or contaminated industrial areas and increasing the safe, sustainable and cyclical use of excavated soils.

In addition, the "Renovation Wave" initiative, which, as announced under the European Green Deal, will lead to significant improvements in energy efficiency in the EU, will be implemented in accordance with the principles of the circular economy, in particular by optimizing the life cycle performance and by increasing the life

expectancy of structured assets. As part of the review of Material Recovery and Demolition Waste Targets, the Commission will pay particular attention to insulation materials, which produce an increasing waste flow.

Food, water and nutrients

The circular economy can significantly reduce the negative impact of extraction and resource use on the environment, and help restore biodiversity and natural capital in Europe. Biological resources are a key input to the EU economy and will play an even more important role in the future. The purpose of the Commission will be to ensure the sustainability of renewable materials of biological origin, including through actions following the Bioeconomy Strategy and Action Plan.

Although the food value chain is responsible for exerting significant pressure on resources and the environment, it is estimated that 20% of total food production is lost or wasted in the EU. Therefore, in line with the Sustainable Development Goals and in the context of the review of Directive 2008/98/EC referred to in section 4.1, the Commission will propose a goal to reduce food waste, as a key action in the framework of the forthcoming EU “Farm to Plate” strategy, which will cover the whole value food chain.

The Commission will also consider specific measures to increase the sustainability of food distribution and consumption. The Commission, as part of the Sustainable Products Initiative, will launch detailed work to define the scope of the reuse legislative initiative to replace packaging, disposable tableware and cutlery with reusable products in food services.

The new regulation on water reuse will encourage the implementation of cyclical approaches to water reuse in agriculture. The Commission will facilitate the reuse and efficient use of water, including in industrial production methods.

In addition, it will develop a comprehensive nutrient management plan to ensure more sustainable nutrient use and to encourage markets for recovered nutrients. The Commission will also consider reviewing the Directives on wastewater and sewage

sludge management and will evaluate natural nutrient removal agents, such as seaweed.

Less waste, greater value

Improving water policy to support prevention of waste generation and circularity

Despite efforts at EU and national level, the amount of waste generated is not declining. The annual production of waste from all economic activities in the EU amounts to 2.5 billion tonnes, or 5 tonnes per capita per year, while each citizen produces almost half a tonne of municipal waste. Disconnecting waste generation from economic growth will require significant effort throughout the value chain and in each home.

Developing a policy on sustainable products and translating it into specific legislation will be crucial to making progress in preventing waste generation. In addition, we need to make the most of, strengthen and better implement EU waste legislation.

EU waste legislation has led to significant improvements in waste management since the 1970s. But it needs to be constantly updated to adapt to the circular economy and the digital age. It will be proposed to review EU legislation on batteries, packaging, end of life vehicles and hazardous substances in electronic equipment to prevent waste, increase recycling, promote safer and cleaner waste flows and ensure high quality recycling.

In addition, the Commission will propose waste reduction targets for specific flows, as part of a wider range of measures to prevent waste generation. The Commission will also improve the implementation of the recently adopted requirements for extended producer responsibility schemes, provide incentives and encourage the exchange of information and good practices in the field of waste recycling. All this will serve the goal of significantly reducing waste production and will cut in half the amount of residual (non-recycled) municipal waste by 2030.

High quality recycling is based on efficient separate waste collection. To assist citizens, businesses and public authorities in better waste sorting, the Commission will propose

the harmonization of separate waste collection systems. In particular, this proposal will cover the most effective combinations of separate collection models, the frequency and accessibility of separate collection points, including public spaces, by taking into account regional and local conditions and covering a wide range of places, from the urban environment to remote areas. Other aspects that facilitate consumer participation will be considered, such as common colors for waste bins, harmonized symbols for basic types of waste, product labels, information campaigns and financial means. It will also seek to standardize and use quality management systems to ensure the quality of waste collected and intended for use in products, in particular as food contact material.

Further efforts are needed to support waste management in the Member States. Half of them are at risk of non-compliance with the 2020 target for recycling 50% of municipal waste. To promote policy reforms, the Commission will organize high-level contacts on the circular economy and waste and strengthen cooperation with Member States, regions and cities to make better use of EU funds. It will also make use of the enforcement forces at its disposal, where required.

Improving circularity in an environment free of toxic substances

EU chemical policy and legislation encourage the transition to safe chemicals from the very beginning of their design through the progressive substitution of hazardous substances for the better protection of citizens and the environment. However, there is still a risk of undermining the safety of secondary raw materials, for example, where prohibited substances are still retained in recycled raw materials. In order to increase confidence in the use of secondary raw materials, the Commission will take the following steps:

- Support the development of high quality sorting and removal of pollutants from waste, including those from occasional pollution.
- Develop methodologies to minimize the presence of substances harmful to health or the environment in recycled materials and objects made from recycled materials

- Work with the industry to gradually develop harmonized tracking and information management systems for substances of very high concern and other relevant substances, in particular those with chronic effects and technical problems in recovery operations along supply chains; and for the detection of these substances in waste, in conjunction with measures under the Sustainable Product Policy and the ECHA database of objects containing substances of very high concern
- Propose amending the Annexes to the Regulation on Persistent Organic Pollutants, in line with scientific and technological developments and international commitments under the Stockholm Convention.
- Improve the classification and management of hazardous substances in order to keep recycling flows clean, including through further alignment with the classification of chemicals and mixtures where required.

The forthcoming Sustainability Chemicals Strategy will further examine the link between chemicals, products and waste legislation and enhance synergies with the circular economy.

Creating a well-functioning EU market for secondary raw materials

Secondary raw materials face some challenges in relation to primary raw materials, for reasons related not only to their safety but also to their performance, availability and cost. Some of the actions envisaged in this action plan, in particular those that introduce requirements for the recycled content of products, will help to prevent supply and demand mismatches for secondary raw materials and ensure the expansion of the recycling industry in the EU. In addition, in order to create a smooth internal market for secondary raw materials, the Commission will take the following steps:

- Assess the prospect of developing, at EU level, criteria for the declassification of waste for specific waste flows, based on the monitoring by the Member States of the implementation of the revised rules for the declassification of waste and by-products,

and cross-border support cooperation initiatives to harmonize national criteria for the declassification of waste and by-products.

- Strengthen the role of standardization based on the ongoing evaluation of existing standardization work at national, European and international level.
- Timely put restrictions on the use of substances of very high concern, in the case of objects in which the use of the substance is subject to a licensing requirement, while continuously improving border enforcement.
- Evaluate the feasibility of setting up a market observatory for basic secondary materials.

Tackling waste exports from the EU

The global waste market is undergoing significant changes. Over the last decade, millions of tones of European waste have been exported to third countries, often without sufficient consideration of proper waste management. In many cases, waste exports have a negative impact on the environment and health in the destination countries, as well as a loss of resources and financial opportunities for the recycling industry in the EU. Recent restrictions on imports by some third countries have highlighted the EU's over-reliance on waste treatment abroad, but have also mobilized the recycling industry to increase its capacity and add value to waste in the EU.

In the light of these developments, and given that the illegal transfer of waste remains a source of concern, the Commission will work to ensure that the EU does not export problematic waste to third countries. Actions related to product design, quality and safety of secondary materials and the strengthening of related markets will help to make the "recycled in the EU" logo, a benchmark for quality secondary materials.

Preparing for waste reuse and recycling in the EU will be facilitated through a thorough review of EU waste transfer rules. The review will also aim to limit exports of waste that are harmful to the environment and health in third countries or can be treated domestically within the EU, focusing on destination countries, problematic waste flows, the types of waste-related and concerning activities, as well as the enforcement

of legislation to combat illegal transport. The Commission will also support multilateral, regional and bilateral measures to combat environmental crime, in particular in areas of illegal exports and trafficking, to strengthen controls on waste shipments and to improve the sustainable management of waste in these countries.

MAKING CIRCULARITY FUNCTIONAL FOR CITIZENS, REGIONS AND CITIES

Between 2012 and 2018, the number of jobs associated with the circular economy in the EU increased by 5%, reaching around 4 million. Circularity is expected to have a positive effect on job creation, provided that employees have the skills required by the green transition. The potential of the social economy, which is at the forefront of job creation, will be further used, with mutual benefits from supporting the green transition and strengthening social inclusion, in particular in the framework of the action plan for the implementation of the European Pillar of Social Rights.

The Commission will ensure that the tools available to support skills and job creation also help to accelerate the transition to a circular economy, including in the context of updating the relevant skills agenda, the launch of a large scale Partnership for Skills and the Action Plan for Social Economy. The European Social Fund + will further promote investment in education and training systems, lifelong learning and social innovation.

To support the necessary investment at regional level, the Commission will use the potential of EU financial instruments and funds to ensure that all regions benefit from the transition. Cohesion policy funds, in addition to raising awareness, cooperation and capacity building, will help regions implement circular economy strategies and strengthen their industrial network and value chains. In the context of the circular economy, solutions will be found specifically adapted to remote areas and islands, due to their dependence on resource imports, high waste production due to tourism and waste exports. The Just Transition Mechanism proposed under the European Green Deal Investment Plan and the InvestEU program will be able to support projects focusing on circular economy.

The proposed European Urban Initiative, the Smart Cities Challenge Initiative and the Circular Cities and Regions Initiative will provide significant assistance to cities. Circular economy will be one of the priority areas of The Green City Accord.

The European Circular Economy Stakeholder Platform will continue to be a forum for the exchange of information between stakeholders.

HORIZONTAL ACTIONS

Circularity as a precondition for climate neutrality

In order to achieve climate neutrality, the synergies between cyclicity and the reduction of greenhouse gas emissions must be enhanced. The Commission will:

- analyze how the impact of circularity on climate change mitigation and adaptation can be systematically measured,
- improve modeling tools to make use of the benefits of the circular economy in reducing greenhouse gas emissions at EU and national level,
- promote the role of cyclicity in future revisions of national energy and climate plans and in other climate policies, as appropriate.

Achieving climate neutrality will require not only reducing greenhouse gas emissions but also removing carbon from the atmosphere, using it in our economy without releasing it, and storing it for longer periods of time. Carbon absorption can be based on nature, including through ecosystem restoration, forest protection, reforestation and carbon farming, or increasing cyclicity, for example through long-term carbon storage in recyclable wood structures, and carbon storage in products, such as carbonation in building materials.

In order to provide incentives to take advantage of carbon removal and increase its circularity, in full respect of biodiversity objectives, the Commission will consider developing a regulatory framework for carbon removal certification, based on robust and transparent carbon accounting to monitor and verify the authenticity of carbon removal absorptions.

Proper financial management

Accelerating the green transition requires careful but decisive measures to orient funding towards more sustainable production and consumption patterns. The Commission has already taken a number of initiatives on this issue, including the integration of the circular economy target into the EU classification regulation, as well as preparatory work on the EU eco-label criteria for financial products. The Circular Economy Finance Support Platform will continue to provide guidance to project promoters on cyclical incentives, capacity building and financial risk management. EU funding instruments, such as SME guarantees under the current framework and the InvestEU program from 2021, mobilize private funding to support circular economy. The Commission has also proposed a new resource for the EU budget, which is based on the amount of non-recycled plastic packaging waste. In addition, the Commission will take the following steps:

- Strengthen the disclosure of environmental data by companies in the forthcoming revision of the Non-Financial Reporting Directive
- Support business initiatives for the development of environmental accounting principles that complement financial data with circular economy performance data
- Encourage the integration of sustainability criteria into business strategies, by improving the corporate governance framework
- Integration of the objectives related to circular economy in the context of the forthcoming reorientation of The European Semester and in the context of the forthcoming revision of the state aid guidelines in the field of environment and energy
- Continuously encourage the wider application of well-designed economic instruments, such as environmental taxation, including landfill and incineration taxes, and enable Member States to use value-added tax (VAT) rates to promote circular economy activities aimed at final consumers (eg repairs).

Promoting the transition through research, innovation and digitization

European companies are pioneers in the field of cyclical innovations. The European Regional Development Fund, through smart specialization, LIFE and Horizon Europe will complement private innovation funding and support the overall innovation cycle to provide market solutions. Horizon Europe will support the development of indicators and data, innovative materials and products, the substitution and elimination of hazardous substances based on the "safe from design" approach, cyclical business models and new production and recycling technologies, including exploring the potential of chemical recycling, taking into account the role of digital tools in achieving cyclical objectives. In addition, Marie Skłodowska Curie actions can support the development of skills, training and mobility of researchers in this field.

Through digital technologies it is possible to track the route of products, components and materials, and the safe disposal of the resulting data. The European Data Portal for smart circular applications will ensure that the architecture and management system provides applications and services such as product passports, resource mapping and consumer information.

The European Institute of Innovation and Technology will coordinate innovation initiatives for the circular economy in collaboration with universities, research organizations, industry and SMEs within the knowledge and innovation communities.

The intellectual property regime needs to adapt to the digital age and the green transition and support the competitiveness of EU businesses. The Commission will propose a copyright strategy to ensure that intellectual property remains a key factor in favoring the circular economy and the emergence of new business models.

GUIDING EFFORTS ON GLOBAL SCALE

The EU can only succeed if its efforts also lead to a global transition to a fair, climate-neutral, resource-efficient and circular economy. It is becoming increasingly necessary

to promote discussions on the definition of a "safe operating space", where the use of various natural resources does not exceed specific local, regional and global limits, while the environmental impact remains within the limits of the planet.

The new sustainable models will create business and employment opportunities for countries with EU prospects, our closest neighbors in the South and East, emerging economies and our key partners around the world, while strengthening ties with European economic factors.

To support the global transition to circular economy, the Commission will take the following steps:

- Through the use of the European Plastics Strategy, will lead international efforts to reach a global agreement on plastics, promoting the adoption of the EU circular economy approach to plastics.
- Propose a global alliance for the circular economy to address knowledge and governance gaps in promoting a global circular economy, and strengthen partnership initiatives, including with large economies.
- Explore the feasibility of defining a "safe haven" for the use of natural resources and consider launching a dialogue on an international agreement on the management of natural resources.
- Forge stronger partnership with Africa to maximize benefits of green transition and circular economy.
- Ensure that free trade agreements reflect the objectives of the circular economy.
- Will continue to promote circular economy in the Western Balkans integration process and in the framework of bilateral, regional and multilateral EU policy dialogues, forums and environmental agreements, as well as in the context of pre-accession and neighborhood assistance, development programs and international cooperation, international platform on sustainable finance.

- Intensify promotional activities, including through European Green Deal diplomacy and circular economy promotion missions, and work with EU Member States to strengthen coordination and joint efforts for a global circular economy.

MONITORING PROGRESS

In line with the Europe Green Deal and the Annual Sustainable Growth Strategy 2020, the Commission will step up its monitoring of national plans and measures to accelerate the transition to a circular economy as part of the re-focus of the European Semester process, with a view to integrating a stronger sustainability parameter.

The Commission will also update the monitoring framework for circular economy. New indicators based as much as possible on European statistics will take into account the focus areas in this action plan as well as the links between cyclicity, climate neutrality and the zero pollution strategy. At the same time, Horizon Europe projects and Copernicus data will improve the measurement of circularity at various levels not yet reflected in official statistics.

Indicators for the use of resources, such as material consumption and footprints, will be further developed to assess material consumption and environmental impacts associated with production and consumption patterns and to monitor and evaluate progress towards the decoupling of economic growth from the use of resources and its effects inside and outside the EU.

Subsection 2.3 What is biodiversity strategy and how is it linked to the restoration of nature in our lives?

BIODIVERSITY — NEED FOR URGENT ACTION

Biodiversity is the great variety of life on Earth: from the world's largest rainforests to small parks and gardens, and from blue whales to tiny fungi. We humans are part of this tissue of life and are completely dependent on it: it gives us the food we eat, it filters the water we drink and it provides the air we breathe. Nature is equally important for our mental and physical well-being, as well as for our society's ability to cope with global change, health threats and disasters. We need nature in our lives.

By giving nature the space it needs, we will have healthy and resilient societies. The recent COVID-19 pandemic makes the need for nature protection and restoration even more urgent. The pandemic raises awareness of the relationship between human health and ecosystem health. It demonstrates the need for sustainable supply chains and consumption patterns that do not exceed the limits of the planet. This reflects the fact that the risk of developing and spreading infectious diseases increases as nature is destroyed. The protection and restoration of biodiversity and the proper functioning of ecosystems are, therefore, crucial to strengthening our resilience and preventing the emergence and spread of future diseases.

Investing in nature conservation and restoration will also be vital to Europe's economic recovery from the COVID-19 crisis. When restarting the economy, it is vital to avoid falling behind and obsessing over destructive old habits. The Europe Green Deal - the EU's growth strategy - will be the compass for recovery, ensuring that the economy serves citizens and society and returns to nature more than it receives. The business argument for biodiversity is imperative. Industry and business rely on genes, species and ecosystem services as critical inputs for production, especially for medicines. More than half of the world's GDP depends on the nature and services it provides, with three key economic sectors — construction, agriculture, and food and beverages — relying heavily on it.

Conserving biodiversity has potential direct economic benefits for many sectors of the economy. For example, conserving marine stocks could increase the seafood industry's annual profits by more than EUR 49 billion, while protecting coastal wetlands could save the insurance industry around EUR 50 billion a year by reducing losses from flood damage. The total benefit / cost ratio of an effective global wildlife

conservation program worldwide is estimated to be **at least 100 to 1**. Investment in natural capital, including the restoration of carbon-rich habitats and climate-friendly agriculture, is recognized as one of the five most important financial recovery policies, which offer high economic multipliers and have a positive impact on the climate. It will be important for the EU to make use of this potential to ensure prosperity, sustainability and resilience to recovery.

Biodiversity is also vital to safeguarding EU and global food security. Biodiversity loss threatens our food systems, endangering our food security and nutrition. Biodiversity also supports a healthy and nutritious diet and improves agricultural livelihoods and agricultural productivity. For example, more than 75% of the world's food crops depend on animal pollination.

Despite this urgent moral, economic and environmental need, nature is in a state of crisis. The five main immediate causes of biodiversity loss —change of use of the soil and the sea, overexploitation, climate change, pollution, and invasive alien species — are causing the rapid extinction of nature. We see changes in our daily lives: concrete blocks are being erected in green spaces, wildlife is disappearing before our eyes and more species are in danger of extinction than at any point in human history. In the last four decades, the world's wildlife populations have shrunk by 60% due to human activity. Nearly three-quarters of the Earth's surface has been altered, squeezing nature into an ever-shrinking corner of the globe.

The biodiversity crisis and the climate crisis are interrelated. Climate change is accelerating the destruction of the natural world through drought, floods and forest fires, while the loss and unsustainable use of nature are in turn the main causes of climate change. But like any crisis, the solutions are interconnected. Nature is a vital ally in the fight against climate change. Nature regulates the climate; nature-based solutions, such as the protection and restoration of wetlands, peatlands and coastal ecosystems, or the sustainable management of marine areas, forests, grasslands and agricultural land, will be essential to reduce emissions and adaptation to climate change. Tree planting and the development of green infrastructure will help us reduce the temperature in urban areas and mitigate the impact of natural disasters.

The loss of biodiversity and the collapse of ecosystems are among the greatest threats facing humanity in the next decade. They also threaten the foundations of our economy, as the cost of inaction is high and is expected to rise. From 1997 to 2011, about 3.5-18.5 trillion EUR were lost worldwide per year in ecosystem services due to the change of land cover, while it is estimated that 5.5-10.5 trillion EUR are lost per year due to soil degradation. In particular, biodiversity loss results in reduced crop and fish harvest yields, increased economic losses from floods and other disasters, and the loss of potential new sources of medicines.

The EU stands ready to show its ambition to reverse the loss of biodiversity, to lead by example and action, and to contribute to the agreement and adoption of a Post-2020 Global Biodiversity Framework at its 15th Conference of the Parties of the Convention on Biological Diversity. This should be based on the primary ambition to ensure the restoration, resilience and adequate protection of all global ecosystems by 2050. The world should commit to the principle of "net profit" in order to return to nature more than they receive. In this context, the world must commit itself not to cause the extinction of species, at least when this could be avoided.

This strategy sets out how Europe can contribute to this goal. As a milestone, its goal is to ensure that Europe's biodiversity is recovering by 2030 for the benefit of our people, the planet, our climate and our economy, in line with the 2030 Agenda for Sustainable Development Goals and the objectives of the Paris Agreement on Climate Change. It addresses the five main causes of biodiversity loss, sets out a strengthened governance framework to fill remaining gaps, ensures full implementation of EU law and brings together all existing efforts. This strategy provides motivation and is characterized by an inventive spirit of action. It reflects the fact that nature conservation and restoration will require more than just regulation. They will require action from citizens, businesses, social partners and the research and knowledge community, as well as strong partnerships at local, regional, national and European level. This strategy is in line with the ambitions and commitments set out in President von der Leyen's policy guidelines and the Europe Green Deal.

The current strategy, adopted in the midst of the COVID-19 pandemic, will also be central to the EU's recovery plan. It will be vital to prevent and develop resilience to future epidemic outbreaks of animal diseases and to provide immediate business and investment opportunities for the recovery of EU economy.

All new initiatives and proposals will be supported by Commission tools for better regulation. Impact assessments, based on public consultation, and environmental, social and economic impact assessment, will help ensure that all initiatives achieve their objectives in the most effective and least burdensome way and abide by the green oath of "doing no harm".

NATURE PROTECTION AND RESTORATION IN THE EUROPEAN UNION

The EU has legal frameworks, strategies and action plans for nature conservation and habitat and species restoration. However, protection is lacking, remediation is small-scale, and enforcement is inadequate.

Nature conservation and restoration must be intensified in order for biodiversity to recover by 2030. This must be done by improving and expanding the network of protected areas and by developing an ambitious nature restoration plan of the EU.

A coherent network of protected areas

Biodiversity performs better in protected areas. However, the existing network of legally protected areas, including those under strict protection, is not sufficiently extensive to protect biodiversity. The data show that the objectives set out in the Convention on Biological Diversity are not sufficient to adequately protect and restore nature. Global efforts are needed, and the EU itself must do more and better for nature and build a truly cohesive trans-European network on nature.

Enlarging protected areas is also an economic need. Marine systems studies estimate that every euro invested in marine protected areas will yield a return of at least 3 EUR. Similarly, aptitude verification of nature legislation has shown that the benefits of the Natura 2000 network are estimated at 200-300 billion EUR per year. The investment needs of the network are expected to support up to 500,000 additional jobs.

For the good of our environment and our economy, and to support the EU recovery from the COVID-19 crisis, we need to do more to protect nature. In this spirit, at least 30% of land and 30% of marine land should be protected in the EU. This is a minimum of 4% for land and 19% for marine land compared to today. The objective is fully in line with those proposed under the Post-2020 Global Biodiversity Framework (see section 4).

In this context, special emphasis should be placed on areas of very high value or biodiversity potential. These are the most vulnerable to climate change and should receive special care in the form of strict protection. Today, only 3% of land and less than 1% of marine areas are strictly protected in the EU. We need to improve our efforts to protect these areas. In this spirit, at least one third of protected areas - representing 10% of the EU land and 10% of the EU marine area - should be strictly protected. This is also in line with the proposed global ambition.

As part of this focus on strict protection, it will be vital to identify, map, monitor and strictly protect all remaining EU primary and old-growth forests. It will also be important to promote this goal globally and to ensure that EU actions do not lead to deforestation in other parts of the world. Primary and old-growth forests are the richest forest ecosystems, which remove carbon from the atmosphere, while storing significant carbon reserves. Significant areas of other carbon-rich ecosystems, such as peatlands, grasslands, wetlands, mangroves and underwater grasslands, should also be strictly protected, taking into account projected shifts in vegetation zones.

Member States will be responsible for defining additional protected and strictly protected areas. The designations should either contribute to the completion of the Natura 2000 network or be made in the context of national protection systems. All protected areas should have clearly defined objectives and conservation measures. The Commission, in cooperation with the Member States and the European Environment Agency, will present in 2020 criteria and guidance for the identification and designation of additional areas, including the definition of strict protection, as well as for appropriate management planning. In this context, the Commission will indicate

how the ecological orientation of cities can contribute to achieving the objectives, as well as other effective conservation measures based on the region.

The targets are for the EU as a whole and could be broken down by EU biogeographical and marine basins or at a more local level. Each Member State should make its share of the effort on the basis of objective ecological criteria, recognizing that each country has a different quantity and quality of biodiversity. Particular emphasis will be placed on the protection and restoration of tropical and subtropical marine and terrestrial ecosystems in the outermost regions of the EU, given their extremely high value for biodiversity.

In addition, in order to have a truly cohesive and sustainable trans-European network for nature, it will be important to create ecological corridors to prevent genetic isolation, facilitate species migration and maintain and strengthen healthy ecosystems. In this context, investments in green and blue infrastructure, as well as cross-border cooperation between Member States, including through European territorial cooperation, should be promoted and supported.

The Commission will seek agreement on criteria and guidance on additional designations with Member States by the end of 2021. Member States will then have until the end of 2023 to make significant progress on the legalization of new protected areas and the integration of ecological corridors. On this basis, the Commission will assess by 2024 whether the EU is well on track to meet its 2030 goals or whether stronger action is needed, including on EU legislation.

Finally, the overseas countries and EU territories also host important biodiversity centers, which are not governed by EU environmental rules. The Commission encourages the Member States concerned to consider promoting equal or equivalent rules in these countries and territories.

Protection of nature: key commitments by 2030

1. Legal protection of at least 30% of the EU land and 30% of the EU marine area and integration of ecological corridors, within a genuine trans-European nature network.

2. Strict protection of at least one third of the EU protected areas, including all remaining EU primary and old-growth forests.
3. Effective management of all protected areas, with clear objectives and conservation measures set and appropriate monitoring.

EU Nature Restoration Plan: Restoration of Land and Sea Ecosystems

The protection of nature that we have will not be enough to bring nature back into our lives. To reverse the loss of biodiversity, people must be more ambitious about restoring nature. With a new EU Nature Restoration Plan, Europe will take the lead.

The project will help improve the condition of existing and new protected areas and restore the diversity and resilience of nature in all landscapes and ecosystems. This means reducing pressures on habitats and species and ensuring that all uses of ecosystems are sustainable. It also means supporting nature recovery, limiting soil sealing and reckless urban sprawl, while tackling pollution and invasive alien species. The plan will create jobs, harmoniously combine economic activities with the development of nature and will help ensure the long-term productivity and value of our natural capital.

Strengthening the EU Legal Framework for Nature Restoration

Restoration of nature is already – partly – a requirement for Member States in existing EU legislation. However, significant implementation gaps and regulatory gaps hinder progress. For example, there is no requirement for Member States to have biodiversity restoration plans. There are not always clear or binding goals, timetables, definitions or criteria for the restoration or sustainable use of ecosystems. There is also no requirement for complete mapping, monitoring or evaluation of ecosystem services, as well as health or restoration efforts. These issues are exacerbated by implementation gaps that prevent existing legislation from achieving its objectives. Stronger support and enforcement is needed. In order to ensure that land and sea restoration strengthens EU's resilience and helps to mitigate and adapt to climate change as a key nature - based strategy, this strategy proposes two lines of action:

- Firstly, and subject to an impact assessment, the Commission will present a proposal for legally binding nature restoration targets in the EU in 2021, for the restoration of degraded ecosystems, especially those with the greatest carbon capture and storage potential, and for the prevention of and reducing the effects of natural disasters. In this context, the conditions under which the objectives must be achieved will be determined, as well as the most effective measures to achieve them. Impact assessment will also examine the possibility of a pan-European methodology for mapping, assessing and achieving the well-being of ecosystems so that they can bring benefits such as climate control, water regulation, soil health, pollination, disaster prevention and protection.
- In this context, the Commission will ask the Member States to increase the level of implementation of existing legislation within clear timeframes and will provide them with relevant support. In particular, it will call on the Member States to ensure that conservation trends and the status of all protected habitats and species do not deteriorate by 2030. In addition, Member States should ensure that at least 30% of species and habitat, currently not in a favorable condition, fall into this category or show a strong positive trend. The Commission and the European Environment Agency will provide guidance to Member States in 2020 on how to select and prioritize species and habitats.

Restoration of nature in agricultural areas

As guardians of our land, farmers play a vital role in conserving biodiversity. They are the first ones to feel the impact of biodiversity loss, but also among the first ones to enjoy the benefits of biodiversity restoration. Biodiversity enables them to provide us with safe, sustainable, nutritious and affordable foods and provides them with the income they need to thrive and grow. European farmers are an essential part of the future of the EU and must continue to be the social and economic hub of many communities throughout the Union.

At the same time, some agricultural practices are a major cause of biodiversity loss. That is why it is important to work with farmers to support and motivate them to move

to fully sustainable practices. Improving the condition and diversity of agricultural ecosystems will increase the sector's resilience to climate change, environmental risks and socio-economic shocks, while creating new jobs, for example in the fields of organic farming, rural tourism or leisure.

In order to support the long-term sustainability of both nature and agriculture, this strategy will work in parallel with the new "Farm to Plate" strategy and the new Common Agricultural Policy (CAP), including through the promotion of ecological programs and results-based payment systems. In implementing the Biodiversity Strategy and the Farm-to-Plate strategy, the Commission will closely monitor progress and improvements in food security and farmers' incomes. The Commission will ensure that CAP strategic plans are evaluated on the basis of strong climatic and environmental criteria and that Member States set explicit national rates for the relevant objectives set out in this Strategy as well as the "Farm to Plate" Strategy. These plans are expected to lead to sustainable practices, such as precision agriculture, organic farming, agroecology, agroforestry, permanent low-intensity meadows, and stricter animal welfare standards.

Farm birds and insects, especially pollinators, are key indicators of the health of agricultural ecosystems and are vital to agricultural production and food security. Their worrying decline must be reversed. As stated in the "Farm to Plate" strategy, the Commission will take steps to reduce by 50% the total use of chemical pesticides by 2030 and the risk posed by them, as well as to reduce by 50% the use of more dangerous pesticides by 2030. This must be supported by the full implementation of the EU Pollinators Initiative. By the end of 2020, the Commission will review the initiative and propose additional measures, if necessary. To provide space for wildlife, plants, pollinators and natural pest control agents, there is an urgent need to restore at least 10% of agricultural land into landscape features of high diversity. These include, but are not limited to, buffer strips, rotating or non set aside areas, hedges, unproductive trees, terrace walls and small lakes. These measures help strengthen carbon dioxide capture, prevent soil erosion and depletion, filter air and water, and support adaptation to climate change. In addition, increasing biodiversity often

contributes to increasing agricultural production. Member States should translate the EU target of 10% into a lower geographical scale to ensure connectivity between habitats, in particular through CAP instruments and CAP strategic plans, according to the "Farm to Plate" strategy, and through the implementation of the Habitats Directive. Progress towards the target will be constantly reviewed and adjusted, if necessary, to mitigate unwarranted impacts on biodiversity, food security and farmers' competitiveness.

Agroecology can provide healthy food while maintaining productivity, increase soil fertility and biodiversity, and reduce the footprint of food production. In particular, organic farming has great potential for both farmers and consumers. The sector creates jobs and attracts young farmers. Organic farming also provides 10-20% more jobs per hectare compared to conventional farms and creates added value for agricultural products. To make full use of this potential, at least 25% of the EU's agricultural area must be organically grown by 2030. In addition to the CAP measures, the Commission will present an action plan on organic farming, which will assist Member States to stimulate both the supply and demand of organic products. The plan will also ensure consumer confidence through promotional campaigns and green procurement. The different starting points and differences in the progress already made in the Member States will be taken into account in the implementation of the agroecological objectives set out in this strategy and in the "Farm to Plate" strategy across the EU.

The adoption of agroforestry support measures in the context of rural development should be increased, as it has great potential for providing multiple benefits to biodiversity, people and the climate.

The reduction in genetic diversity must also be reversed, inter alia by facilitating the use of traditional crops and breeds. This will also bring health benefits through a more diverse and nutritious diet. The Commission is considering revising the marketing rules for traditional varieties in order to contribute to their conservation and sustainable use. The Commission will also take steps to facilitate the registration of seed varieties,

including organic farming, and to provide easier market access for traditional and locally adapted varieties.

Addressing land takes and restoring soil ecosystems

Soil is one of the most complex ecosystems. It is a unique habitat, which hosts an incredible variety of organisms that regulate and control basic ecosystem services, such as soil fertility, nutrient cycling and climate regulation. Soil is an extremely important non-renewable resource, vital to human health and economic well-being, as well as to the production of food and new medicines.

In the EU, soil degradation has significant environmental and economic implications. Poor land management, such as deforestation, overgrazing, unsustainable agricultural and forestry practices, construction activities and land sealing are among the main causes of this situation. Despite recent reductions in soil sealing rate, fertile soils are still being lost due to land takes and reckless urban sprawl. In combination with climate change, the effects of soil erosion and organic carbon loss are becoming increasingly apparent. Desertification is also a growing threat in the EU.

It is therefore important to intensify efforts to protect soil fertility, reduce soil erosion and increase soil organic matter. This should be done through the adoption of sustainable soil management practices, including under the CAP. Significant progress is also needed in identifying contaminated soils, restoring degraded soils, establishing conditions for their good ecological status, setting restoration targets and improving monitoring of soil quality.

In order to address these issues in a comprehensive way and to help meet EU and international commitments on land degradation neutrality, the Commission will update the EU's thematic strategy on soil in 2021. These issues will also be addressed in the Zero Pollution Action Plan for air, water and soil, to be approved by the Commission in 2021. Soil sealing and restoration of contaminated industrial areas will be addressed in the forthcoming strategy for a sustainable structured environment. A mandate in the field of soil health and food under the Horizon Europe program will aim to develop solutions for the restoration of soil health and functions.

Increasing the amount of forests and improving their health and resilience

Forests are of great importance for biodiversity, climate and water regulation, the provision of food, medicine and materials, the capture and storage of carbon dioxide, the stabilization of soil and the purification of air and water. It is also a natural habitat for recreation and learning about nature. Foresters play a key role in ensuring sustainable forest management and in restoring and conserving forest biodiversity.

In addition to strictly protecting all remaining EU primary and old-growth forests, the EU must increase the quantity, quality and resilience of its forests, in particular against fires, droughts, pests, diseases and other threats that may increase with climate change. In order to maintain their function for both biodiversity and climate, all forests must be maintained in good health. More resilient forests can support a more resilient economy. They also play an important role in the provision of materials, products and services, which are the key to the circular bioeconomy.

To this end, the Commission will propose a specific EU forest strategy in 2021 in line with our broader ambitions for biodiversity and climate neutrality. It will include a roadmap for planting at least 3 billion extra trees in the EU by 2030, in full respect of ecological principles. This will create significant employment opportunities related to collecting and cultivating seeds, planting seedlings and ensuring their growth. Tree plantation is particularly beneficial in cities, while in rural areas it can be harmoniously combined with agroforestry, landscape features and increased carbon capture. At the same time, the Commission will continue to work with Member States to ensure that the EU is adequately equipped to prevent and deal with large forest fires, which can cause significant damage to forest biodiversity.

Tree plantation and reforestation, as a support to restoration of biodiversity and ecosystems, will be promoted through CAP strategic plans and cohesion policy funds. The new European platform for ecological orientation of cities will also facilitate the plantation of trees in cities, including under the LIFE program.

The proportion of forest areas covered by management plans should include all managed public forests and an increased number of private forests, while biodiversity-

friendly practices, such as geophysical forestry, should be continued and further developed. To this end, the Commission will draw up guidelines on biodiversity-friendly tree plantation, reforestation and geophysical forestry practices. This will be done in parallel with the EU's new forestry strategy.

In order to have a better picture of the health of European forests, the Commission will work with other data providers to further develop Europe's forest information system. This cooperation will contribute to the development of up-to-date assessments of the state of European forests and to the connection of all online forest data platforms in the EU. This system will also be presented in the context of the EU forestry strategy.

Power generation solutions beneficial for everyone

Removing carbon emissions from the energy system is crucial for climate neutrality, as well as for the EU's recovery from the COVID-19 crisis and long-term prosperity. The supply of renewable energy from more sustainable sources will be essential in combating climate change and biodiversity loss. The EU will give priority to solutions such as ocean energy and offshore wind power, which also allow for the regeneration of fish stocks, as well as solar farms that provide biodiversity-friendly land cover and sustainable bioenergy.

To mitigate climate and environmental risks due to the increasing use of certain bioenergy sources, the revised Renewable Energy Directive includes enhanced sustainability criteria. It also promotes the transition to advanced biofuels based on residues and non-reusable and non-recyclable waste. This approach should be continued for all forms of bioenergy. The use of whole trees, as well as food and food crops for energy production, whether produced in the EU or imported, should be minimized.

To better understand and monitor potential climate and biodiversity risks, the Commission assesses biomass supply and demand at EU and global level, as well as the related sustainability. As part of its growing ambition to protect and restore forest ecosystems, the Commission will publish the results of this work on the use of forest

biomass for energy production by the end of 2020. These results will shape policy including - when necessary - the re-examination and review of the level of ambition of the Renewable Energy Directive, the Emissions Trading Scheme and the Land Use, Land Use Change and Forestry Regulation (LULUCF), set for 2021.

Under the Renewable Energy Directive, the Commission will also develop operational guidance in 2021 on the new sustainability criteria for forest biomass for energy. Also, in 2021 it will review the data on biofuels with a high risk of indirect land use change and will open the way for their gradual abolition by 2030.

The overall objective is to ensure that the EU regulatory framework for bioenergy is in line with the enhanced ambitions set out in the European Green Deal.

Restoration of the good environmental condition of marine ecosystems

Restored and well-protected marine ecosystems have significant health benefits and bring social and economic benefits to coastal communities and the EU as a whole. The need for stronger action is growing, as the loss of biodiversity of marine and coastal ecosystems is significantly exacerbated by global warming.

Achieving good environmental status of marine ecosystems, including through strictly protected areas, must include the restoration of carbon-rich ecosystems, as well as important spawning and fish breeding areas. Some of the modern uses of the sea endanger food security, fishermen's livelihoods and the fisheries and seafood sectors. Marine resources must be collected in a sustainable way and there must be zero tolerance for illegal practices. In this context, full implementation of the EU Common Fisheries Policy, the Marine Strategy Framework Directive and the Birds and Habitats Directives is essential.

Implementing an ecosystem management approach in line with EU legislation will reduce the negative impact of fishing, mining and other human activities, especially on vulnerable seabed species and habitats. To support this goal, the Maritime Spatial Planning to be implemented by the Member States in 2021 should aim to cover all

maritime sectors and activities, as well as area conservation management measures. The Commission will also propose a new action plan for the conservation of fishery resources and the protection of marine ecosystems by 2021. Where necessary, measures will be taken to reduce the use of fishing gear that is more harmful to biodiversity, including seabed. It will also examine how the use of seabed fishing gear can be reconciled with biodiversity targets, as it is currently the most damaging activity for the seabed. This must be done in a fair and just manner for all. The European Maritime and Fisheries Fund should also support the transition to more selective and less harmful fishing techniques.

Healthy fish stocks are the key to the long-term well-being of fishermen and the health of our oceans and biodiversity. This makes it even more important to maintain or reduce fishing mortality at or below maximum sustainable yield levels. This will help to achieve a healthy distribution of age and population size for fish stocks.

By-catches of endangered species must also be eliminated or reduced to a level that allows full recovery. This should also apply to catches that are in poor conservation or bad environmental condition. In addition, by-catches of other species must be eliminated or, where this is not possible, minimized so as not to jeopardize their conservation status. To support this, by-catches data collection should be strengthened for all sensitive species.

In addition, fisheries management measures should be adopted in all marine protected areas, in accordance with clearly defined conservation objectives and based on the best available scientific advice.

Restoration of freshwater ecosystems

The EU legal framework for water is ambitious, but implementation is delayed and enforcement needs to be strengthened. Greater efforts are needed to restore freshwater ecosystems and natural river functions in order to achieve the objectives of the Water Framework Directive. This can be achieved by removing or adjusting barriers that prevent migratory fish from crossing and improving water and sediment flow. To achieve this goal, at least 25,000 km of rivers will be restored into free-flowing

rivers by 2030 through the removal of mostly obsolete barriers and the restoration of floodplains and wetlands. In 2021, the Commission will provide technical guidance and support to Member States in locating sites and assist in mobilizing funding, in consultation with all relevant authorities. Member State authorities should review water abstraction and retention permits for ecological flows in order to achieve good surface water potential and groundwater potential by 2027 at the latest, as required by Water Framework Directive. To this end, the Commission will provide technical assistance to Member States regarding their measures by 2023.

Overall, large-scale investments in river and floodplain restoration can give a major economic boost to restoration and local socio-economic activities, such as tourism and leisure. At the same time, these investments can improve water regulation, flood protection, fish farms and the elimination of nutrient pollution.

Ecological orientation of urban and suburban areas

Urban green spaces, from parks and gardens to green roofs and urban farms, provide a wide range of benefits to people. They also provide business opportunities and a nature reserve. They reduce air and water pollution, as well as noise pollution, provide protection against floods, droughts and heat waves, while maintaining a connection between humans and nature.

Recent traffic restrictions due to the COVID-19 pandemic have highlighted the value of urban green spaces for our physical and mental well-being. While the protection of some urban green spaces has increased, green spaces often lose in the competition for land, as the share of the population living in urban areas continues to grow.

The current strategy aims to reverse these trends and halt the loss of green urban ecosystems. The promotion of healthy ecosystems, green infrastructure and nature-based solutions should be systematically integrated into urban planning, including public spaces and infrastructure, and into the design of buildings and their environments.

In order to restore nature in cities and reward community action, the Commission calls on European cities with a population of at least 20,000 to develop ambitious urban eco-orientation plans by the end of 2021. These plans should include measures to create bio-diverse and accessible urban forests, parks and gardens, urban farms, green roofs and walls, tree lines, urban meadows and urban hedges. They should also help to improve the links between green spaces, eliminate pesticide use, reduce lawn mowing of urban green spaces and other biodiversity-harmful practices. These projects could mobilize policy, regulatory and financial instruments.

To facilitate this task, the Commission will set up in 2021 an eco-orientation platform for EU cities, as part of a new "eco-city pact" with cities and mayors. This will be achieved in close cooperation with the European Covenant of Mayors. Eco-orientation plans for cities will play a central role in the selection of the European Green Capital for 2023 and the "European Green Leaf" award for 2022.

The Commission will support Member States and local and regional authorities through technical guidance and help mobilize funding and capacity building. It will also reflect these objectives in the European Climate Pact.

Reducing pollution

Pollution is a major cause of biodiversity loss and has a negative impact on our health and the environment. Although the EU has a solid legal framework for reducing pollution, more efforts are still needed. Biodiversity is affected by the release of nutrients, pesticides, chemicals, pharmaceuticals, hazardous chemicals, municipal and industrial wastewater, and other waste, including garbage and plastics. All these pressures must be reduced.

As part of the Commission's zero-pollution ambition for a toxic-free environment, a new EU chemicals strategy for sustainability will be promoted with a Zero Pollution Action Plan for air, water and soil.

The Commission will also promote the goal of zero pollution from nitrogen and phosphorus flows from fertilizers by reducing nutrient losses by at least 50%, while

ensuring that soil fertility is not degraded. This will reduce the use of fertilizers by at least 20%. This will be achieved through the full implementation and enforcement of relevant environmental and climate legislation, identifying with Member States the nutrient load reductions required to achieve these objectives, implementing balanced fertilization practices and sustainable nutrient management, and better management of nitrogen and phosphorus throughout their life cycle. To this end, the Commission will work with Member States to develop a comprehensive action plan for nutrient management in 2022. The “Farm to Plate” strategy will address the reduction of pesticide use and risk, and will support the wider implementation of integrated pest management. In this context, the environmental risk assessment of pesticides will be strengthened. The pressure from plastics is being addressed mainly through the implementation of the European Plastics Strategy and the new Action Plan for Circular Economy.

The Commission will develop a set of indicators for the progressive reduction of pollution and will establish guidelines for monitoring progress. Pressures from marine waste and submarine noise are covered by the Marine Strategy Framework Directive.

Dealing with invasive alien species

Invasive alien species can significantly undermine nature conservation and restoration efforts. In addition to causing serious damage to nature and the economy, many invasive alien species also facilitate the outbreak and spread of infectious diseases that pose a threat to humans and wildlife. The rate of release of invasive alien species has increased in recent years. Of the 1,872 most endangered species in Europe, 354 are endangered by invasive alien species. Without effective control measures, the rate of invasion and the risks it poses to our nature and health will continue to rise.

The implementation of the EU regulation on invasive alien species, as well as other relevant legislative acts and international agreements, should also be strengthened. The aim should be to minimize and, where possible, eliminate the introduction and installation of alien species in the environment of the EU. The aim will be to manage

the established invasive alien species and to reduce the number of Red List Threatened Species by invasive alien species by 50%.

EU Nature Restoration Plan: key commitments by 2030

1. Proposal for legally binding EU nature restoration targets in 2021, subject to impact assessment. Significant areas of degraded and carbon-rich ecosystems will be restored by 2030. Habitats and species do not show deterioration in trends and conservation status, and at least 30% achieve a satisfactory conservation status or at least show a positive trend.

2. The reduction of pollinators is reversed.

3. The risk and use of chemical pesticides are reduced by 50% and the use of more dangerous pesticides is reduced by 50%.

4. At least 10% of agricultural land has high diversity landscape features.

5. At least 25% of agricultural land is managed by organic farming and the adoption of agri-ecological practices is increasing significantly.

6. Three billion new trees are planted in the EU, in full respect of ecological principles.

7. Significant progress has been made in restoring contaminated soils.

8. Restoration of at least 25,000 km of free-flowing rivers.

9. There is a 50% reduction in the number of Red List Threatened Species by invasive alien species.

10. Nutrient losses from fertilizers are reduced by 50%, resulting in a reduction in fertilizer use by at least 20%.

11. Cities with a population of at least 20,000 have an ambitious ecological orientation plan.

12. Chemical pesticides are not used in sensitive areas, such as EU urban green spaces.

13. The negative impacts on sensitive species and habitats, including seabed, through fishing and mining activities, are significantly reduced to achieve a good environmental status.

14. By-catches of species are eliminated or reduced to a level that allows species to recover and be conserved.

FACILITATING TRANSFORMATIONAL CHANGE

New governance framework

In the EU, there is currently no comprehensive governance framework to guide the implementation of national, European or international agreed biodiversity commitments. To address the gap, the Commission will implement a new European governance framework for biodiversity. This framework will contribute to the mapping of commitments and engagements and to the development of a roadmap to guide their implementation.

In this new context, the Commission will implement a monitoring and review mechanism. This will include a clear set of agreed indicators and allow for regular evaluation of progress and corrective action, if necessary. This mechanism will assist in the monitoring of the implementation of environmental policy and contribute to the European Semester process.

The new governance framework will ensure co-responsibility by all stakeholders for meeting EU's biodiversity commitments. It will support administrative capacity building, transparency, stakeholder dialogue and participatory governance at various levels.

The Commission will assess the progress and suitability of this approach in 2023 and consider whether a legally binding approach to governance is required.

Intensifying implementation and enforcement of EU environmental legislation

All environmental legislation is based on the proper implementation and enforcement of legislation. For the last 30 years the EU has implemented a solid legal framework for the protection and restoration of its natural capital. Recent assessments, however, show that, although the legislation is appropriate for its intended purpose, on-the-spot implementation is lagging behind. This has dramatic consequences for biodiversity and entails significant economic costs. Therefore, the full implementation and enforcement of EU environmental legislation is at the heart of this strategy, which should prioritize policy support and financial and human resources.

With regard to the Birds and Habitats Directives, enforcement will focus on the integration of the Natura 2000 network, the effective management of all sites and provisions for the protection of species and declining species and habitats. The Commission will also ensure that environmental legislation that has an impact on biodiversity is better implemented, enforced and, if necessary, reviewed and revised.

The Commission will seek to improve compliance, in close cooperation with the Member States and the European networks of environmental organizations, inspectors, auditors, police, prosecutors and judges.

In addition, the Commission will support the role of civil society as a control body for compliance and work with Member States to improve access to justice in national environmental courts for individuals and NGOs. It will also expand the legalization of NGOs by proposing a revision of the Aarhus Convention.

Further development of an integrated approach for society as a whole

Entrepreneurship for biodiversity

In the context of the partnership of the current strategy, all sectors of the economy and society should play their part. Industry and business have an impact on nature, but they also generate significant innovations, partnerships and expertise that can help tackle biodiversity loss.

In order to ensure the full integration of environmental and social interests into business strategies, the Commission will present in 2021 a new initiative for Sustainable Corporate Governance. This initiative, which can take the form of a legislative proposal, will address human rights and the environmental duty of care and due diligence in economic value chains, in a proportionate way, depending on the different sizes of companies. This will help ensure that the interests of shareholders and stakeholders are fully aligned with the objectives set out in this strategy. In addition, in 2020, the Commission launched a review of business reporting obligations under the Non-Financial Reporting Directive, with a view to improving the quality and

scope of non-financial information, including environmental aspects such as biodiversity.

Through existing platforms, the Commission will contribute to the creation of a European entrepreneurship movement for biodiversity, drawing inspiration from recent initiatives and making it an integral part of the European Climate Pact. Special attention will be paid to measures aimed at motivating and removing barriers to the adoption of nature-based solutions, as these can lead to significant business and employment opportunities in a variety of sectors and are the key to innovation for economic or nature-based social needs.

Investments, pricing and taxation

Tackling biodiversity loss and restoring ecosystems will require significant public and private investment at national and European level. This means that all relevant EU programs and funding instruments will be fully utilized. The Commission will strengthen its biodiversity protection framework, including making appropriate use of the criteria set out in the EU classification to ensure that EU funding supports biodiversity-friendly investments.

To meet the needs of this strategy, including investment priorities for the Natura 2000 network and green infrastructure, at least 20 billion EUR per year should be allocated to nature expenditure. This will require the mobilization of private and public funding at national and EU level, including through a series of different programs in the next long-term EU budget. In addition, as nature restoration will make a significant contribution to achieving climate goals, a significant 25% of the EU budget destined for climate action will be invested in biodiversity and nature-based solutions.

Under InvestEU, a special initiative on natural capital and circular economy will be established, with the aim of investing at least 10 billion EUR over the next 10 years, based on mixed public / private funding. Nature and biodiversity are also a priority of the investment plan under the Europe Green Deal. In order to facilitate the release of the required investments, the EU must provide long-term security to investors and help integrate sustainability into the financial system. EU's ranking on sustainable

financing will help guide investment towards green recovery and implement nature-based solutions. In 2021, the Commission will adopt a delegated act under the Classification Regulation establishing a common classification of economic activities which make a significant contribution to the protection and restoration of biodiversity and ecosystems. This will be further supported by a renewed strategy for sustainable financing later this year, which will ensure that the financial system helps mitigate existing and future risks to biodiversity and better reflect how biodiversity loss affects business profitability and long-term prospects.

The Commission will promote further tax systems and pricing, which will reflect real costs, including biodiversity loss. This initiative should encourage changes in national fiscal systems to shift the tax burden from labor to pollution, to underpriced resources and other external environmental factors. The "user pays" and "the polluter pays" principles must be applied to prevent and correct environmental degradation.

The purchasing power of public authorities represents 14% of EU GDP and can serve as a strong driver of demand for the products and services of companies that invest in or contribute to nature-based solutions. To take advantage of this potential, the Commission, when proposing further legislation and guidance on green public procurement, will incorporate criteria and monitoring to promote nature-based solutions.

Measuring and integrating the value of nature

Biodiversity issues need to be better integrated into public and business decision-making processes at all levels. In 2021, taking advantage of the existing work, the Commission will develop methods, criteria and standards for describing the key characteristics of biodiversity, its services, its values and its sustainable use.

These will include measuring the environmental footprint of products and organisms in the environment, including through life-cycle approaches and physical capital accounting. In this context, the Commission will support the establishment of an international physical capital accounting initiative.

Improving knowledge, education and skills

The fight against biodiversity loss must be based on sound scientific evidence. Investing in research, innovation and knowledge sharing will be crucial to gathering the best data and developing nature-based solutions. Research and innovation can test and develop how to prioritize "green" solutions over "gray" solutions, and also help the Commission to support investment in nature-based solutions, such as old industrial areas, low-income areas or areas affected by natural disasters.

The new skills agenda will play a key role in the transition to a green economy and in the fight against biodiversity loss, with an emphasis on training and retraining the workforce in a wide range of sectors.

The future Horizon Europe program will include a long-term strategic biodiversity research agenda, as well as a scientific policy mechanism for research-based options to gradually and steadily increase the implementation of biodiversity commitments, with increased funding. The mandates of Horizon Europe will make a significant contribution to bridging knowledge gaps and finding solutions to improve the health of ecosystems and their contribution to human health.

At the same time, the Commission will promote and facilitate partnerships, including a specific biodiversity partnership, to link science, policy and practice and put nature-based solutions into practice. The Commission will also set up a new Knowledge Center for Biodiversity in 2020, in close cooperation with the European Environment Agency. The Center will: (i) monitor and evaluate the progress of the EU and its partners, including in the implementation of international instruments related to biodiversity; (ii) strengthen cooperation and partnership, inter alia, between its scientists on climate change and biodiversity; and (iii) support policy development. In addition, the Commission will increase its support for the Intergovernmental Science-Policy Platform on biodiversity and ecosystem services.

In order to contribute to the integration of biodiversity and ecosystems in schools, higher education and vocational training, the Commission will propose in 2021 a Council Recommendation to encourage cooperation in the field of education on

environmental sustainability. This will provide guidance to schools and teachers on how to work together and exchange experiences between Member States on biodiversity education. The Commission will also provide support material and facilitate the exchange of good practices on EU teacher training networks.

THE EUROPEAN UNION FOR AN AMBITIOUS GLOBAL AGENDA ON BIODIVERSITY

Biodiversity is a priority of EU external action and an integral part of its efforts to achieve the United Nations Sustainable Development Goals. Through "diplomacy under the European Green Deal" of the EU and the forthcoming green alliances, it will be integrated into all bilateral and multilateral commitments. The Commission will work closely with the European Parliament and the Member States to ensure a high level of EU ambition and to mobilize all efforts for the benefit of global biodiversity.

Increasing the level of ambition and commitment worldwide

Protecting biodiversity is a global challenge and the next decade will be crucial. Global efforts under the United Nations Convention on Biological Diversity are largely inadequate. In matters concerning nature, half of the measures cannot be applied or there is lack of ambition.

In this spirit, the EU is ready to lead all efforts - in partnership with like-minded partners in a highly ambitious biodiversity alliance - to agree on an ambitious new Post-2020 Global Biodiversity Framework at the forthcoming 15th Conference of the Parties to the Convention on Biological Diversity.

With this strategy, the Commission proposes ambitious commitments that the EU can make. The EU should also support governments and stakeholders around the world to significantly enhance their ambition and action.

The Commission proposes that the EU ensure that the global framework for the post-2020 period includes at least the following elements:

- Primary global goals for biodiversity for 2050, in line with the United Nations 2030 Agenda for Sustainable Development and the vision of "living in harmony with nature". The ambition should be that by 2050 all the ecosystems of the planet are

restored, are resilient and adequately protected. People will have to commit to the principle of "net profit" in order to return to nature more than they receive. People should commit to not causing species extinction, at least when it could have been avoided.

- Ambitious global targets for 2030, in line with the EU's commitments in this strategy. These objectives should clearly address the causes of biodiversity loss in a specific, measurable, workable, relevant and time-bound manner.
- Much stronger enforcement, monitoring and review process. Parties should review national biodiversity strategies and action plans by the end of 2021 or at least make national commitments on key objectives. There should be a regular review cycle to review progress towards the objectives, with the possibility of a gradual and steady increase in action, if needed. These reviews should be based on an independent, scientifically based deficiency analysis and investigation process on the prospects, with common key indicators for all parties.
- A favorable framework for the fulfillment of ambition in various areas, such as finance, capacity, research, innovation and technology.
- A fair and equitable distribution of the benefits of using biodiversity-related genetic resources.
- The principle of equality. This includes respect for rights and the full and effective participation of indigenous peoples and local communities. There should be an inclusive approach involving all stakeholders, including women, youth, civil society, local authorities, the private sector, academia and scientific institutions.

Using external action to promote EU ambition

International ocean governance

According to the agenda for international ocean governance, the EU will support the conclusion of an ambitious, legally binding agreement on Marine Biodiversity of Areas

Beyond National Jurisdiction (BBNJ) by the end of 2020. The agreement should set out clear global procedures for the tracking, designation and effective management of ecologically characteristic, open-sea marine protected areas and should be validated and implemented as soon as possible.

The EU should also use all diplomatic influence and rapprochement to help mediate an agreement on the designation of three vast marine protected areas in the Southern Ocean, two of which have been jointly proposed by the EU in East Antarctica and at the Weddell Sea. If this agreement is reached, it will be one of the most important acts for nature protection in history.

This work will continue through the cooperation with partner countries and regional organizations in order to establish measures for the protection and sustainable use of sensitive marine ecosystems and species, including in areas beyond national jurisdiction, with an emphasis on marine biodiversity centers. The EU should continue to support small developing island states and other relevant partner countries to participate in meetings of regional and global organizations and bodies and to implement relevant international commitments and regulations.

The EU will implement zero tolerance for illegal, unreported and unregulated fishing and will fight overfishing, including through the WTO negotiations on a global agreement to ban harmful subsidies in the fishing industry.

In international negotiations, the EU should argue that marine minerals on the international seabed cannot be exploited until the effects of deep sea mining on the marine environment, biodiversity and human activities have been adequately investigated, before the risks are understood and before technologies and business practices are able to demonstrate that they do not seriously harm the environment, in accordance with the precautionary principle and taking into account the call of the European Parliament. At the same time, the EU will continue to fund research on the impact of deep water mining activities and on environmentally friendly technologies. The EU should also support enhancing transparency in international organizations, such as the International Seabed Authority.

Trade policy

Trade policy will actively support and contribute to the ecological transition. In this context, the Commission will ensure the full implementation and enforcement of biodiversity provisions in all trade agreements, including through the First Chief Trade Enforcement Officer. The Commission will better assess the impact of trade agreements on biodiversity by taking monitoring measures to strengthen the provisions of existing and new biodiversity agreements, as appropriate. In 2021, the Commission will also present a legislative proposal and other measures to prevent or minimize the placing of deforestation or forest degradation related products on the EU market and to promote forest-friendly imports and value chains. The Commission will take some steps to crack down on the illegal wildlife trade. This trade contributes to the depletion or extinction of entire species, is the fourth most lucrative black market on the planet and is considered one of the causes for the emergence of animal diseases. Its elimination is important for the people, the economy and the environment.

In this context, the Commission will review the EU Action Plan to Combat Wildlife Trafficking in 2021 and propose further strengthening of ivory trade rules in the EU later this year. It will explore a possible revision of the Environmental Crime Directive, including expanding its scope and enacting specific provisions on the types and levels of criminal sanctions. It will consider strengthening the coordination and investigation capabilities of the European Anti-Fraud Office (OLAF) to work with Member States and third countries to prevent illegal trade and the entry of illegal products into the single market.

The Commission will continue to work with partner countries to ensure a smooth and fair transition, in particular by mobilizing trade aid to ensure that partners enjoy the benefits of biodiversity-friendly trade.

International cooperation, policy of proximity and resource mobilization

Achieving an ambitious global biodiversity framework for the post-2020 period will require greater cooperation with partners, increased support and funding, and the

gradual elimination of subsidies that are detrimental to biodiversity. Over the last decade, the EU and its Member States have collectively fulfilled their commitment to double their funding flows to developing countries for biodiversity objectives. The EU stands ready to continue its cooperation with its partners and to further increase its support for the post-2020 period. This will be part of its work on the conservation, restoration, sustainable use and integration of biodiversity into all development and partnership policies. In addition, by integrating the coherence of sustainable development policy into all its policies, the EU will reduce the pressure on biodiversity worldwide. The EU should promote sustainable agricultural and fishing practices and actions to protect and restore the world's forests across the spectrum of international cooperation. Particular attention will also be paid to the sustainable management of water resources, the restoration of degraded soils and the protection and restoration of biodiversity areas with high ecosystem services and climate change mitigation potential. Better protection of natural ecosystems, combined with efforts to reduce trade and consumption of wildlife, will also help prevent and develop resilience to potential future diseases and pandemics. The EU will strengthen its support for global efforts to implement the One Health approach, which recognizes the inherent link between human health, animal health and a sustainable nature.

The EU will increase its support to partner countries around the world to achieve new global goals, fight environmental crime and tackle the causes of biodiversity loss. In Africa, the EU will launch the NaturAfrica initiative to protect wildlife and key ecosystems, while offering green opportunities for local people. Similar projects will be developed in other areas. The EU will also support the countries of the Western Balkans and the EU's neighboring countries in their efforts to protect biodiversity.

In all its work, the EU will strengthen the links between biodiversity protection and human rights, gender, health, education, conflict sensitivity, rights - based approach, land ownership and the role of indigenous peoples and local communities.

As part of its global efforts, the EU will promote biodiversity coalitions with partners and civil society around the world. For example, in March 2020, the Commission launched the Global Coalition for Biodiversity regarding national parks, aquariums,

botanical gardens, zoos, natural history and science museums, in order to raise awareness of the need to protect and cultivate biodiversity. The Commission will consider launching or joining other high-ambition coalitions to develop the post-2020 framework.

Summary of Educational Unit 2

In the above section, the definition of what is eco-friendly business was given. Eco-friendly literally means earth-friendly or not harmful for the environment. The construction of a truly eco-friendly product takes into account both environmental and human safety. The Eurobarometer survey that followed proved the shift of citizens towards products that respect the environment.

As for circular economy, the transition to this kind of productive process will be systemic, profound and transformative inside and outside the EU. It will sometimes have a negative impact, so it must be fair. It will require alignment and cooperation of all stakeholders at all levels - EU, national, regional and local, and international.

It also emerged from the above that the protection and restoration of biodiversity is the only way to maintain the quality and continuity of human life on Earth. The commitments proposed in this strategy pave the way for ambitious and necessary changes — changes that will ensure the well-being and economic well-being of present and future generations in a healthy environment. The implementation of these commitments will take into account the diversity of challenges in all sectors, regions and Member States, it will recognize the need to ensure social justice, a sense of justice and inclusion according to the Europeans, and a sense of responsibility and strong joint efforts by the EU, its Member States, stakeholders and citizens.

To ensure full political ownership of the strategy, the Commission will propose a permanent point of progress to the Council and the European Parliament. It will review the strategy by 2024 to assess progress and whether further action is needed to achieve its goals.

It is more relevant than ever, and due to the COVID 19 pandemic, the shift of companies, producers and all those involved in the production and business chain to more environmentally friendly approaches.

Self-assessment Questions – Educational Unit 2

1. Eco-friendly literally means earth-friendly or not harmful for the environment.
 - True ● False

2. Climate change, air pollution and waste are the three most important environmental issues, according to the Eurobarometer.
 - True ● False

3. The Eurobarometer survey shows that citizens:
 - A) want to do more to protect the environment
 - B) believe that large companies and the industry should take joint responsibility
 - C) believe that responsibility must be borne by national governments and the EU, as well as by the citizens themselves
 - D) all of the above

4. Citizens interviewed believe that the most effective way to deal with environmental problems is to:
 - A) change the way we consume
 - B) change the way we produce
 - C) change the way we conduct our commercial transactions
 - D) all of the above
 - E) A & B

5. Global consumption of materials such as biomass, fossil fuels, metals and minerals is expected to increase 10 times over the next 40 years, while annual waste production is projected to decrease by 70% by 2050.
 - True ● False

6. Applying the principles of the circular economy to the EU economy enables the EU to grow by an additional 0.5% by 2030, creating around 700000 new jobs.
- True ● False
7. In what materials is world consumption expected to double in the next 40 years?
- A) biomass,
 - B) fossil fuels
 - C) metals and minerals
 - D) A & B
 - E) A & B & C
8. Up to 80% of the environmental impact of products is not determined at the design stage.
- True ● False
9. The amount of materials used for packaging is constantly increasing, and in 2017 packaging waste in Europe reached an unprecedented level of 173 kg per capita.
- True ● False
10. Textile products do not have high greenhouse gas emissions.
- True ● False
11. The linear production model includes:
- A) purchase-production-use-disposal
 - B) production-use-disposal-purchase
 - C) purchase-use-rejection-production
 - D) purchase-production-disposal-use

12. The construction sector accounts for more than 35% of the total waste production in the EU.

- True ● False

13. Increasing the efficient use of materials can save 80% of greenhouse gas emissions

- True ● False

14. Between 2012 and 2018, the number of jobs related to circular economy in the EU increased by 5%.

- True ● False

15. The proposed European Urban Initiative is not about the Circular Cities Initiative.

- True ● False

16. What are the categories of highest pressure in order, in terms of the use of raw materials and water.

- A) food, housing, transport and textiles
- B) housing, food, transport and textiles
- C) transport, housing food and textiles
- D) housing, transport, food and textiles

17. Investing in nature conservation and restoration is not vital to Europe's economic recovery from the COVID-19 crisis.

- True ● False

18. More than half of world GDP depends on the nature and services it provides.

- True ● False

19. The overall benefit/cost ratio of an effective global conservation program for the remaining wildlife is estimated to be at least 100 to 1.

- True ● False

20. Enlargement of protected areas is not an economic requirement.

- True ● False

21. The European Farm to Plate strategy will lead to:

- A) sustainable agricultural practices
- B) precision agriculture
- C) increasing organic farming
- D) all of the above
- E) none of the above

22. 25% of EU agricultural land must be organically grown by 2030.

- True ● False

23. The Farm to Plate strategy will address the reduction of pesticide use and risk and support the wider implementation of integrated pest management.

- True ● False

24. Research and innovation will focus on how to prioritize "green" solutions.

- True ● False

25. Agroecology can offer:

- A) healthy food while maintaining productivity
- B) increase in soil fertility
- C) reduction in the footprint of food production
- D) all of the above
- E) A & B

26. Horizon Europe will not include a long-term strategic biodiversity research agenda.

- True ● False

27. The mandates of the Horizon Europe program will make a significant contribution to:

- A) filling the gaps of environmental knowledge
- B) finding solutions to improve the health of ecosystems
- C) finding solutions to improve human health
- D) all of the above
- E) B & C

28. The EU will propose the Council Recommendation to encourage cooperation in the field of education on environmental sustainability.

- True ● False

29. The EU will ensure the full implementation and enforcement of biodiversity provisions in all trade agreements.

- True ● False

ANNEX - UNIT 2

Answers to the Self-assessment Questions (in the form of an annex)

1) Eco-friendly literally means environmentally friendly or not harmful to the environment. (True)

2) Climate change, air pollution and waste are the three most important environmental issues, according to the Eurobarometer. (True)

3) The Eurobarometer survey shows that citizens:

- A) want to do more to protect the environment
- B) believe that large companies and industries should take joint responsibility

C) believe that responsibility must be borne by national governments and the EU, as well as by the citizens themselves

D) all of the above

4) Citizens interviewed believe that the most effective way to deal with environmental problems is to:

A) change the way we consume

B) change the way we produce

C) change the way we conduct our commercial transactions

D) all of the above

E) A & B

5) Global consumption of materials such as biomass, fossil fuels, metals and minerals is expected to increase 10 times in the next 40 years, while annual waste production is projected to decrease by 70% by 2050. (False)

6) The application of the principles of the circular economy in the EU economy provides the possibility of increasing the EU GDP by an additional 0.5% by 2030, with the creation of approximately 700000 new jobs. (True)

7) In which materials is world consumption expected to double in the next 40 years?

A) biomass

B) fossil fuels

C) metals and minerals

D) A & B

E) A & B & C

8) Up to 80% of the environmental impact of the products is not determined at the design stage. (False)

9) The amount of materials used for packaging is constantly increasing, and in 2017 packaging waste in Europe reached an unprecedented level of 173 kg per capita. (True)

10) Textiles do not have high greenhouse gas emissions. (False)

11) The linear production model includes:

A) purchase-production-use-disposal

- B) production-use-disposal-purchase
 - C) purchase-use- disposal-production
 - D) purchase-production-disposal-use
- 12) The construction sector is responsible for more than 35% of the total waste production in the EU. (True)
- 13) Increasing the efficient use of materials can save 80% of greenhouse gas emissions. (True)
- 14) Between 2012 and 2018, the number of jobs related to circular economy in the EU increased by 5%. (True)
- 15) The proposed European Urban Initiative is not about the Circular Cities Initiative. (True)
- 16) What are the categories of highest pressure in order, in terms of the use of raw materials and water:
- A) food, housing, transport and textiles**
 - B) housing, food, transport and textiles
 - C) transport, housing food and textiles
 - D) housing, transport, food and textiles
- 17) Investing in nature protection and restoration is not vital to Europe's economic recovery from the COVID-19 crisis. (False)
- 18) More than half of world GDP depends on the nature and the services it provides. (True)
- 19) The total benefit/cost ratio of an effective global conservation program for the remaining wildlife is estimated to be at least 100 to 1. (True)
- 20) Enlargement of protected areas is not an economic requirement. (False)
- 21) The European Farm to Plate strategy will lead to:
- A) sustainable agricultural practices
 - B) precision agriculture
 - C) increasing organic farming
 - D) all of the above**

E) none of the above

22) 25% of EU agricultural land must be organically grown by 2030. (True)

23) The Farm to Plate strategy will address the reduction of pesticide use and risk and will support the wider implementation of integrated pest management. (True)

24) Research and innovation will focus on how to prioritize "green" solutions. (True)

25) Agroecology can offer:

A) healthy food while maintaining productivity

B) increase in soil fertility

C) reduction in the footprint of food production

D) all of the above

E) A & B

26) Horizon Europe will not include a long-term strategic biodiversity research agenda. (False)

27) The mandates of the Horizon Europe program will make a significant contribution to:

A) filling the gaps of environmental knowledge

B) finding solutions to improve the health of ecosystems

C) finding solutions to improve human health.

D) all of the above

E) B & C

28) The EU will propose the Council Recommendation to encourage cooperation in the field of education on environmental sustainability. (True)

29) The EU will ensure the full implementation and enforcement of biodiversity provisions in all trade agreements. (True)

Unit 3 How to make a business ECO-FRIENDLY – Success examples

Purpose

The purpose of this training module is to inform and explain to the trainees the steps that a company must take in order to be classified as eco-friendly. It also presents successful examples of companies that have developed this philosophy in their production process. Finally, the benefits that a company will have from its transformation into eco-friendly will be presented.

Expected results

Upon completion of the training module the trainees will be able to know:

- How to make their business Eco Friendly
- Which well-known companies are Eco Friendly
- What are the benefits for a business to become Eco Friendly

Key concepts:

- Eco Friendly

Subsection 3.1. Steps to create an Eco Friendly business

There are many steps that can be taken in order to make a business Eco Friendly. Whether your business is small or large, there are steps you can take immediately to reduce your environmental impact. See below the ways to make your business more environmentally friendly.

1 - Switch to reusable office supplies

In the United States, more than four million pens are thrown away every day. Simply switching to reusable pens which you can refill with ink, could help your business keep a lot of plastic away from landfills.

Limit paper waste by replacing notebooks with desktops, tablets, or laptops with mini dry erasers. Taking notes online is another eco-friendly option.

Appoint someone to monitor the static cabinet in an effort to help the office turn green. Having someone to pay attention to what products are used and wasted the most, it may be easier to identify the extra changes you can make.

2 - Practice green procurement eco-friendly business tips

One of the easiest ways to reduce the environmental impact of your business is to practice green procurement. Take a look at your suppliers and look for suppliers that provide products that have been produced in a sustainable way.

Avoid suppliers who use excessive packaging. Make sure the consumables are free of toxic substances that are harmful to the environment and buy only materials that can be recycled or reused. Paying attention to where your supplies and goods come from is a simple way to make your business more environmentally friendly.

If possible, find suppliers in your area. In addition to supporting your local economy, this could reduce the carbon footprint, eliminating the need to ship your products and supplies from remote locations.

3 - Choose Green Web Hosting

Did you know that running all servers in the United States is the equivalent of running five nuclear power plants? Servers need to be up and running continuously, and this increases a lot of environmental damage.

By choosing green web hosting, you can ensure that at least some of the energy required to power your site comes from a renewable energy source. This is much more environmentally friendly and very affordable.

Since the hosting company has already saved money by choosing to generate its own energy, it is able to transfer savings to consumers. This usually makes green hosting more affordable than traditional web hosting. It's a great way to make your business more environmentally friendly, while at the same time it helps you gain the trust of your customers. Green hosting is also reliable, so you do not have to worry about your business while your offline.

4 - Reduce energy consumption

There are countless ways to reduce energy consumption in offices and other workplaces. You can replace incandescent light bulbs with LED bulbs and lights. If possible try to work in your office using alternative energy sources. Wind, solar and geothermal energy are all viable options.

As wind and solar energy become more affordable, green energy incentives have become widely available to businesses of all sizes. Business owners can choose to buy green energy at reduced rates. In this way, they can reduce their environmental impact while possibly reducing their operating costs.

5 - Make recycling a priority

Recycling is one of the most important steps you can take to make your business more environmentally friendly. Whether you work in an office, warehouse or any other type of workplace, there is a big chance you will generate a lot of waste.

Committing to a recycling program rather than sending all of the waste to landfill can make a huge difference.

Start by paying close attention to the types of things you throw away. It is possible for your office to generate more recyclable waste than you realize. Paper products, cardboard packaging, beverage bottles, etc. are all items that are obviously recyclable.

However, there are also many less obvious items that we you can avoid sending to the landfills through recycling. Ink cartridges and toner cartridges, for example, can be sent for recycling or remanufacturing. With over 350 million cartridges ending up in landfills each year, your option to recycle can have a huge impact.

There are also ways to recycle old computers and accessories. When upgrading, ask the seller if he accepts old equipment for recycling. Companies like HP and Dell offer such programs.

You may also be able to recycle electronic online at your local office supply store. If you need to get rid of computers that are up and running under the age of five, you may be able to donate them to a charity that will renovate them.

Subsection 3.2. Examples of Eco Friendly busines

Thanks to Al Gore and the "Reduce, Reuse, Recycle" campaigns promoted during the 1990s, we all know that caring for our environment is essential.

With climate change being a growing problem and Earth Day being very close, there has never been a more important time to collectively realize how we are impacting the planet - as individuals, companies and businesses.

This was quickly realized by some businessmen. One of them is Elon Musk. He is one of the most successful entrepreneurs in the world. He makes billions of dollars every two minutes almost exclusively through green companies like Tesla and SolarCity. Now other companies are starting to follow.

Let's take a look at environmentally friendly brands that positively impact our planet and have a huge commercial success in the process.

1) TOMS

During a visit to Argentina in 2006, world traveler Blake Mycoskie was disappointed to see how many children grew up barefoot, making life incredibly difficult for them and their families. It was then that he had the idea to start a for-profit company that donates a pair of shoes to a child for each pair sold.



At a rapid pace, in 11 years TOMS has donated over 60 million shoes to children around the world. To increase its reach and help more people, TOMS has since expanded to provide clean drinking water, eye care and safe birth kits to communities in need around the world.

In addition to supporting people, TOMS also respects our planet. All their shoes (and even the soles) are made from sustainable, recyclable and vegan materials.

How TOMS uses greening

TOMS corporate philosophy appears in all brand names and their design. By including photos of children and communities that they support in their marketing material, they are able to build a stronger emotional connection to their mission.

How can you be like TOMS

Doing good for the environment and doing good for humanity go hand in hand. Find a cause/mission for which you are passionate about and make it the driving force behind your brand. If you are already an established company, do not worry! You can even identify a cause for which you care strongly (and a green cause in it!) and integrate it into your brand DNA.

For example, if you want to deliver clean water to communities in need, make a "corporate takeover" for one month of the year. Redesign your website and marketing material to focus on your clean water initiative and give a share of your sales for this month to your cause.

When your customers see the good you do in the world, an emotional connection will be created. They will want to be involved in what you do and therefore sales will increase.

2) Patagonia

For all of you who are not outdoors people, Patagonia is one of the most successful active clothing retailers in the world that sells everything from snow equipment to pants and sleeping bags that can be used in multiple situations.



And because these people usually have a very high ecological conscience, the corporate philosophy of Patagonia is green. They have set up repair centers around the world to increase the life of their products and reduce the carbon footprint. In 2016, they pledged \$ 10 million from Black Friday sales to environmental grassroots groups dedicated to conserving and protecting the planet.

Patagonia's corporate philosophy is "100% for the planet", but it is not perfect. They were open and honest about areas of their business that needed improvement, such as the use of fossil fuels to make the upper layer of their coats, an activity that can contribute to climate change.

Patagonia's commitment to change and improve these processes and move towards becoming more sustainable and environmentally friendly distinguishes them from their less green competitors.



How Patagonia uses greening

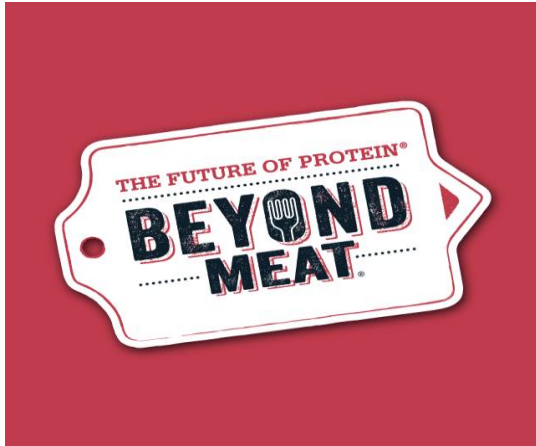
Patagonia's durable design and philosophy speak to their target outdoors audience but they also reflect its commitment to have the protection of the environment as the main focus of the brand.

How can you be like Patagonia

Not yet 100% environmentally friendly? It's OK. No one expects you to be perfect. Transparency and commitment to a more sustainable business will help customers connect with you. For example, suppose you have not yet implemented a company recycling policy. Be open, transparent, and let your team and customers know you are working on a solution.

3) Beyond Meat

Any environmentalist would agree that the biggest problem that our generation is facing right now is climate change. And who is one of the biggest contributors to this environmental crisis?



The meat industry.

There is no doubt that meat production has serious negative effects on our environment.

This is where Beyond Meat begins.

Beyond Meat revitalizes the food industry by creating delicious "meat" (approved carnivores) plant products that are better for the human health, the environment, climate change and animals. In terms of taste, it remains as good as it was before.

How Beyond Meat uses greening

The Beyond Meat brand focuses on the good they do for the environment and their consumers. Combining stunning graphics and photos of products that have good quality, they can show the benefits from all sides: how their products save the planet while saving the health of their consumers.



How can you be like Beyond Meat

Sometimes all you need to do to protect the environment is in the packaging. If your company is not traditionally environmentally friendly, put your own environmental "seal" to protect the planet. For example, if you have a small printing company, you can offer a discount to your customers who print on recycled paper. There is an opportunity for every business to be greener - even for the most unexpected ones. You need to get a little creative.

4) Wipro EcoEnergy

It may not be widely known, but Wipro EcoEnergy is doing great things in the world of green business by providing "smart and sustainable solutions for energy-efficient operations and efficiency management in companies". In other words, it works with companies to help them reduce their carbon footprint and energy waste, saving them tons of money.



Wipro does not disclose these customer savings numbers, but is much more open about how they helped the environment. To date, energy management services have saved more than 1.5 billion kWh, equivalent to 222,600 vehicles staying off the road for one year.

How WiPro EcoEnergy uses greening

As a consulting firm, Wipro stays in the background and lets their clients' results speak for themselves. This is quite obvious in their design. Their website is clean and simple, illustrating the environmental impact that their services have on their customers and leaving the results in the focus.

How can you be like Wipro EcoEnergy

When it comes to being eco-friendly, it is a win-win situation both for you and your customers. Wipro has been able to reduce customer energy costs and reduce carbon footprint at the same time. Think of ways you can show your customers how green practices not only benefit the environment, but also directly benefit them.

5) Lush Fresh Handmade Cosmetics

If you are not (a) a beauty lover, (b) a bath lover or (c) an enthusiast with simple feelings, you may not have heard of Lush Cosmetics.



Lush Cosmetics is a natural bath and body brand that does everything from shampoos and fragrances to all kinds of bath products that inspire bloggers around the world.

In addition to making the world more beautiful, one person at a time, Lush is dedicated to eco-friendly products and practices, such as creating solid shampoo bars to reduce packaging waste and offering free products to customers who bring empty packaging of products for recycling. Their great success and dedication to eco-conscious practices and great green initiatives pave the way for other beauty companies to follow.



How Lush uses greening

Lush's earthy, organic sense of design, products and stores reflect their commitment to our earthy, organic planet. Once you see their brand, you will not be surprised in any way that they are devoted to ecology. Therefore, they attract the kind of customers who are dedicated to ecology as well.

How to be like Lush

You do not need to be a green company to have green practices. Whatever industry you are in, there are ways to incorporate more sustainable practices to make your business more environmentally friendly. Take a page out of Lush's book and implement a recycling program, offering a free product or discount in exchange for recyclable products. For example, if you have a clothing boutique, you can offer a discount to customers who bring a clothing bag for donation.

6) Numi Tea

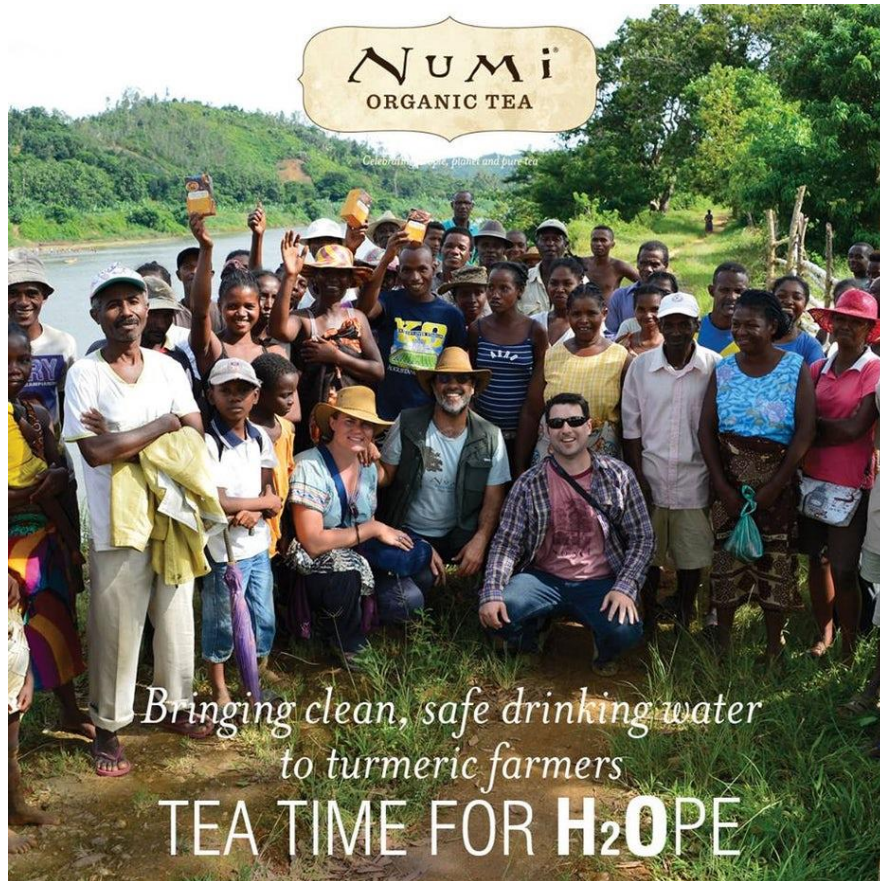
Numi Tea is an excellent tea company with environmentally friendly production methods.



Celebrating people, planet and pure tea

Numi Tea has sustainability in its DNA. Their mission is to unite the mind, body and spirit through tea, and to extend this holistic idea to help protect our planet.

Not only do they talk the talk, but they walk the walk as well. Everything Numi Tea does is related to their mission: from sustainable packaging to donating to environmental non-profit organizations and monitoring carbon emissions during the production process. They certify that every step in the supply, production and sale of their tea is environmentally sound.



Numi Tea is also the brains behind OSC2 (One Step Closer to an Organic Sustainable Community), a team of CEOs and business leaders from the natural products industry with a sustainable focus dedicated to improving sustainability in all sectors. They are committed to improving not only their own practices, but also business practices in general. This is their commitment.

How Numi Tea uses greening

Everything in the design and brand of Numi Tea is organic and environmentally friendly. Just as green practices are part of the DNA of the brand, the environmentally friendly atmosphere is also part of their design DNA. Numi uses many earthy colors such as brown in their design and branding. This is not very common, but it does make sense for an organic brand. When people see brown (the color of the soil) combined with their overall eco-label, they feel connected to anything earthy.

How can you be like Numi Tea

The reason why Numi Tea is so successful in its sustainable practices is because it is part of who they are. Introduce sustainable practices to the core of your corporate mission. When it is part of who you are as a brand, it will penetrate into what you do and becoming green will become effortless. Let's say you have a surf shop. Make green practices part of your brand by selling only recycled boards or arrange a monthly beach clean-up with your team.

7) Apple

When you hear the words "environmentally friendly", the first thing that comes to mind is not the largest technology company in the world. But just because it is not an honest company that advocates for environmental causes, does not mean that they are not involved.



Apple may not say that it uses green methods, but they have made a significant contribution to environmental change. In 2015, they signed a nearly \$ 1 billion deal with First Solar, the largest solar farm company in the United States. Using their technology, Apple powers all of its California stores, offices, data centers and headquarters with solar power, making it the largest solar power supply deal for a for-profit company in history.

Apple also focuses on the sustainability of its products and packaging. Apple Renew program encourages the recycling of old or used Apple devices and 99% of the packaging paper is recycled or sustainable.

How Apple uses greening

The deal with First Solar was great news and most companies would feel the need to change their website, design and branding to show it. But not Apple. They know who they are - a highly respected technology company with a sleek, minimalist design - and they will stay that way, no matter how environmentally conscious.



Apple's new solar-powered campus in Cupertino. Via [Apple](#)

How can you be like Apple

There is no rule that says your eco-friendly practices should be at the forefront. Remember, you should not become environmentally friendly just to be noticed. Be "green" to protect the environment. Whatever your business is, do not worry about what others will think of you as "green". Just do it.

8) Seventh Generation

Seventh Generation is a company that has revolutionized the cleaning industry with environmentally friendly cleaning products without harmful toxins and chemicals. It is the combination of being awesome for the environment and awesome for human

health. The company also recently topped Forbes' annual "Best For The Environment" list, which lists companies that go beyond simple practices.

How Seventh Generation uses greening

Similar to Numi Tea, Seventh Generation is so bold with its eco-friendly design, it is impossible to miss. Given it is so focused on the environment it certainly stays true to their name.



How can you be like Seventh Generation

Seventh Generation is a fairly traditional green company, but the secret of their success is how they managed to expand beyond the typical customer base, highlighting the benefits of products aimed at all consumers - not just ecologists. If you can promote other benefits of your product (Seventh Generation focused on health), you will have even more customers on board in your environmentally friendly mission.

Whether you are already a green expert or just assisting an eco-friendly brand, there are lessons to be learned from these examples.



9) IKEA

IKEA has invested in sustainability throughout its business activities, including what customers can and cannot see. The Swedish furniture manufacturer's supply chain uses 50% sustainable wood and the cotton used in the furniture comes 100% from farms that meet Better Cotton standards which require reduced use of water and energy as well as reduced use of fertilizers and pesticides.

You can also see their commitment to sustainability in the stores.



IKEA has over 700,000 solar panels that maintain its stores and intends to start selling them to customers in the UK. In 2012, IKEA announced its goal of using 100 % energy renewable resources by 2020 - but just four years later it decided to become a clean energy exporter at the same time.

10) Unilever

Unilever has done much more than just green investments. It has made sustainability part of its corporate identity. The company's Sustainable Living Plan sets targets for sourcing, supply chain and production on everything, from energy and water use to treatment of suppliers and communities where they operate.



When it was first adopted in 2010, CEO Paul Polman said he wanted to double the company's business, while halving its environmental impact in just 10 years. It has taken great steps: three-quarters of Unilever's non-hazardous waste does not go to landfills, and the share of agricultural suppliers using sustainable practices has tripled. The United Nations awarded the CEO of the company with the Champions of the Earth in 2015 for his efforts to achieve this goal.

11) Panasonic

Panasonic doesn't get as many public accolades as many companies (something that Interbrand, which ranks companies on sustainability, calls a "gap"), but consistently wins high marks from experts. Like many companies on this list, Panasonic has ambitious energy goals, both in terms of efficiency and renewable energy, and also focuses on producing environmentally friendly products.



What distinguishes them is the way they have incorporated sustainability into their daily lives. It moved its North American headquarters from the suburb of Seacaucus, New Jersey to a LEED-certified building in downtown Newark by Penn Station, a deliberate move to eliminate the need for employees to drive to work and reduce their carbon footprint. They are also working with several companies to launch a Sustainable Smart Town show in Japan focusing on sustainability.

12) Allergan

The Venn diagram between environmentalism and Botox has a fairly small overlap, but smack in the middle of it is Allergan, the Botox producer who has been at or near the top of Newsweek's green companies ranking for years. The California-based pharmaceutical company started its commitment to sustainability more than two decades ago, with a water conservation policy based on reporting and benchmarking.



Their strategy has grown from water to energy conservation, waste reduction and emissions reduction in both their direct operations and supply chain. In 2016, it won

the Environmental Protection Agency's EnergySTAR Award for the fifth time, recognizing its achievements in energy efficiency.

13) IBM

IBM was another early adopter of sustainability and eco-friendly business. Corporate social responsibility and environmental stewardship has been part of the company's mission since the 1960s. Its first sustainability report was published in 1990 and its data centres have received awards from the European Commission for their long-time energy efficiency successes.



Today, IBM's efforts include smart buildings that reduce resource demand, green procurement, water resource management and more for a truly comprehensive approach.

14) New Belgium Brewing

Colorado-based New Belgium Brewing is an industry leader when it comes to sustainability, an ethos that is shot through every part of the company from its production and marketing to encouraging employees and customers to bike rather than drive.



The brewery diverts 99.8 per cent of its waste from landfills. In addition to making energy efficiency integral to their brewing process, they're also an outspoken advocate for climate change action and signatories to both the BICEP pro-climate business coalition and the Brewery Climate Declaration.

15) Adobe

Adobe systems was the greenest IT company in Newsweek's 2014 rankings, a well-earned distinction. The company has already made some impressive achievements, including obtaining LEED certification for more than 70 per cent of its workspaces, including the restoration of a historic building in San Francisco.



It also has ambitious goals—including getting to net zero energy consumption and reducing its packaging, packaging being a resource drain and big contributor to plastic

pollution. Adobe was also a corporate leader in reducing its water use to respond to California's historic drought, even after it had already reduced its water use by more than 60 per cent since 2000 through means like installing environmentally friendly fixtures and landscaping with native plants.

16) Nike

Nike hasn't always had a stellar record when it comes to corporate sustainability, but they've made a lot of change that's doing a lot of good. Nike topped Morgan Stanley's list in 2015 of most sustainable clothing and footwear brands. Key to their success is the company's robust disclosure about its supply chain and production practices. They're also making it easier for designers to make green choices with an app that helps you compare the environmental footprint of different fabrics.



Like, Patagonia, it also uses post-consumer recycled materials in some of its products, including its 2011 World Cup jerseys. It's also redesigned its boxes to reduce packaging, committed to eliminating chemical discharges, invested in energy efficiency in its factories and more. Nike is also partnering with NASA and other government agencies to spark innovation in chemistry to green the processing of raw materials into goods.

Subsection 3.3. Eco Friendly business benefits

From retailers to manufacturers, from financial and high-tech companies, most companies can now enjoy the abundant financial rewards that lead their business in an environmentally friendly direction.

Your company can benefit from tax exemptions, government subsidies, savings from environmentally friendly practices and increased popularity and demand through your behavior as a green company. So, whether you offer insurance or technology services, or run a restaurant or dry cleaning business, environmentally friendly business practices are cost-effective, smart and responsible business goals.

Consumers are increasingly demanding natural products and social responsibility from suppliers and retailers through sustainability and green practices. Most importantly, many are willing to pay more for these values and requirements. Nielsen's global online survey this year identified that 66% of its respondents worldwide commit to environmentally friendly products, services and businesses. The following green factors were mentioned as the top eight decisive factors:

Products from natural, fresh, organic ingredients

Eco-friendly brand

A brand recognized for its social value

Eco-friendly packaging

Ads that highlight the connection of environmental and social benefits to the brand

TAX BENEFITS AND OTHER FINANCIAL INCENTIVES

The US government understands the need for sustainable and renewable energy. In an effort to support this approach, it offers a variety of tax benefits to businesses that are becoming green. This includes tax exemptions, discounts and other financial incentives. These financial incentives are offered at both state and federal level. Here are some examples:

Professional discounts for installing HVAC, indoor lighting or hot water systems that significantly reduce energy use.

Tax discounts and grants of 10 and 30 percent for the use of alternative energy properties.

Tax discounts for the use of alternative vehicles that meet specific fuel efficiency standards.

Depreciation bonus for special recycling and reusing of specific equipment or machinery.

Tax exemptions are not the only governmental benefits offered to green companies. There are also various grants, subsidies and funding programs for a company or entrepreneur seeking to be more environmentally friendly. The Environmental Protection Agency provides grants for specialized programs related to environmentally responsible approaches to a variety of business activities. The Small Business Administration (SBA) offers financing solutions to business organizations that support green solutions in new construction, remodeling of existing structures and the advancement of green technologies. These are just some of the many government grants available to companies that influence environmentally friendly practices and solutions.

Eco-friendly business measures naturally lead to savings. Practices such as energy saving, recycling, use of water saving devices, energy saving equipment, solar energy and reduced waste help to reduce costs and have repeatedly proven to be more efficient and cost effective than traditional energy use.

Green companies and brands are usually more attractive to customers, clients and employees and this appeal is growing steadily. A company can increase sales to new customers who prefer to buy from green businesses. The previously mentioned Nielson global online survey supports this conclusion, as do many other studies and surveys that track consumer trends. With employees and consumers recognizing and adding value to environmentally friendly products and companies, it makes sense for any organization to explore this option. In fact, if you are committed to green business

practices, it makes sense to apply for a green certification, also known as a sustainability certification. Winning the certification seal will help green marketing and promote your achievement to your employees and customers.

Green will be worth it for businesses in Europe

Environmental awareness is steadily rising in Europe, both for companies and for citizens. According to a poll, 94% of Europeans believe that protecting the environment is important to them personally, and more than half of them say it is very important. Citizens and companies are well aware of the environmental threats, especially plastic waste, climate change, pesticide use and other threats to biodiversity.

However, for many businesses and citizens, this environmental attitude has somehow been disconnected from action, even though most people believe they could and should do more. The European Union economy consists almost entirely of small and medium-sized enterprises (SMEs), around 20 million. They create the largest employment in Europe and much of the EU's GDP. Even though their individual environmental impacts are small, their cumulative impact is significant. In their environmental (or not) action can the real green consciousness be measured and not in their recognition that there is a problem.

That needs to change. Fortunately, businesses in Europe are facing plenty of "environmental offers" that provide a timetable and solutions for reductions in energy use, material waste, water use and recycling efforts. Measures for best environmental practices can be found online with just a few clicks. Small and large companies from different sectors also have access to many training opportunities, workshops, labels, services and products to make the production and consumption process truly "green".

Whether it is eco-innovation funds and capacity building workshops offered by public bodies, public or private organizations, or services provided by associations, companies can ask for green support in most EU Member States at low entry costs. Small businesses can also expand their offerings with environmentally friendly

products and services, while larger companies can build new markets with cost-effective resources, eco-designed products and so on.

Why should a business go green?

If you are not convinced of the socio-environmental responsibility that your business has to take on, you may be more receptive to the benefits of having a green attitude with resource efficiency measures, green products and services and a circular economy.

Resource efficiency, for example, is a simple idea and definitely the first step in entering a circular model. Resource efficiency means increasing your business revenue streams by reducing resource usage, environmental impact and operating costs. For the more active or just for businesses that understand that protecting the environment means better economic performance, reduced risk of fines related to environmental legislation, access to public procurement, cost savings or enhanced employee engagement, environmental management systems support and certify thousands of organizations every year.

The Eco-Management and Audit Scheme (EMAS) refers to all the positive results of every EMAS certified organization, small and large, through audited environmental statements. The results speak for themselves:

- Between 2012 and 2013, Lufthansa City Line fuel consumption decreased by 2.8%.
- Hyundai Motor Manufacturing Czech s.r.o. cleans the air with 97% efficiency after painting vehicles.
- Between 2013 and 2014, the Liceu Opera saved more than 26% of its energy use for heating and domestic hot water - saving € 190,000.
- Palau de la Musica Catalana reduced water consumption by more than 23% between 2010 and 2014.
- Between 2011 and 2016, Martin's Hotels reduced the total energy use of its 11 hotels by 12.5%.

- Ricoh has revolutionized the printing business, becoming a champion in circular economy. Ricoh lends printing machines to its customers, allowing the company to maintain, collect, reuse and recycle machine parts.

As these examples show, green is becoming more and more attractive as a business strategy. Many studies show that companies committed to sustainability perform financially better than their competitors.

Offering green products and services could be the next step for large and small businesses. Today, only 33% of all SMEs in the EU offer green products or services, while the market is in demand in all sectors (4% per year even during the 2008 recession).

At EU level, many labels certify that a product or service is green. Among them, the EU Ecolabel promotes excellence in the label industry. With 40,000 products and services, from children's clothing to electronics, this label helps companies and consumers navigate the green maze. It is a trusted label that identifies products and services with reduced environmental impact.

Recognizing that businesses, governments and consumers are not moving fast enough to protect the environment, a new economic model is emerging rapidly: a circular economy. In a circular economy, the value of products and materials is maintained in the system as much as possible. The use of waste and resources is minimized and when a product reaches the end of its life, it is used again to create further value.

That means local jobs, local products and local benefits in a globalized economy. This new model will affect several businesses, such as the latest EU legislation, which plans to ban disposable plastics by 2021. The food chain will then follow, along with the construction sector, products based on organic products and, of course, critical raw materials.

As it is known, the energy sector is the global strategic pillar of development that primarily concerns the Greek economy, while at the same time it is the strongest sector with the largest, often adverse impact on the natural and cultural resources on which tourism is based.

Consequently, the importance of the energy and environmental issues at national and international level is very high and commonly known as New Energy Finance (Bloomberg, 2006). Especially for Greece, the issue of energy is crucial for its economic development, both because of its almost exclusive dependence on conventional energy sources (SMEs), such as domestic and polluting lignite or imported oil and liquefied natural gas, as well as for the development opportunities offered in a country like Greece, which has the comparative advantage of fundamental geostrategic importance in relation to its energy issues.

It is daily confirmed that "green growth", which is based on sustainable resources, is a great opportunity for the future of our country. It is, after all, a clear and achievable national goal, and more relevant than ever today, and we are called upon to face two key challenges: overcoming the grip of the international economic crisis and tackling environmental problems effectively (especially in relation to climate change) to the extent that they concern our country. Already in many countries of the world, as well as in Greece, the new environmental economy (RES, recycling, reuse of resources, etc.) has begun to bear fruit. It creates investment opportunities in many sectors, especially in tourism, which is the most comparative and competitive advantage of the Greek economy, while strengthening the overall economic activity and contributing to the creation of new jobs (basic and current problems of our national economy).

If after all this you are still not convinced that your business should go green, beware: your competitors will do just that.

Summary of Educational Unit 3

In the training module that we just completed, the trainees were introduced to the steps that a company must take in order to be classified as Eco Friendly.

Specifically, it highlighted that the most important steps are:

- Switching to reusable office supplies
- Practicing green procurement eco-friendly business tips
- Green Web Hosting
- Reducing energy consumption
- Recycling

Successful examples of companies that developed this philosophy in their production process were also presented. Examples included: TOMS, Patagonia, Beyond Meat, Wipro EcoEnergy, Lush Cosmetics, Numi Tea, Apple, Seventh Generation, IKEA, Unilever, Panasonic, Allergan, IBM, New Belgium Brewing, Adobe, Nike.

Finally, the benefits of transforming a company into eco-friendly were analyzed. The benefits are multifaceted. Businesses like this have tax exemptions while they have access to several financial instruments.

Self-assessment Questions – Educational Unit 3

1. Which of the following are ways to make your business more environmentally friendly?
 - A) Reusable office supplies
 - B) Practice of green procurement
 - C) Use of mobile phone
 - D) All of the above
 - E) A & B

2. Which of the following are ways to make your business more environmentally friendly?
 - A) Reduce energy consumption
 - B) Select Green Web Hosting
 - C) Make recycling a priority
 - D) All of the above
 - E) A & C

3. What are the benefits for a company when it becomes ecofriendly?
 - A) Tax exemptions
 - B) State subsidies
 - C) Savings from environmentally friendly practices
 - D) Increased popularity and demand
 - E) All of the above

4. Consumers:
 - A) Demand more and more natural products
 - B) Demand greater social responsibility from suppliers
 - C) Are willing to pay more for these values and requirements
 - D) All of the above
 - E) A & B

5. 5. Which of the following green factors were mentioned in the top eight decisive factors:
- A) Products from natural, fresh, organic ingredients
 - B) An eco-friendly brand
 - C) Eco-friendly packaging
 - D) Price
 - E) All of the above
 - F) A & B & C
6. Environmental awareness is steadily declining in Europe, both for companies and citizens.
- True ● False
7. Resource efficiency means increasing your business revenue flows by reducing resource usage, environmental impact and operating costs.
- True ● False
8. Companies committed to sustainability perform better than their competitors in terms of finance.
- True ● False
9. Today, only 33% of all SMEs in the EU offer green products or services.
- True ● False
10. At EU level, few labels certify that a product or service is green.
- True ● False
11. In Greece, the new environmental economy (RES, recycling, reuse of resources, etc.) has begun to bear fruit.
- True ● False

ANNEX - UNIT 3

Answers to the Self-assessment Questions

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9) Today, only 33% of all SMEs in the EU offer green products or services. (True)

10) At EU level, few labels certify that a product or service is green. (False)

11) In Greece, the new environmental economy (RES, recycling, reuse of resources, etc.) has begun to bear fruit. (True)



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Interreg Greece-Bulgaria EnvironmentYou

European Regional Development Fund



Presentations

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Biodiversity

Eco-friendly Business

Unit 1: ECO-FRIENDLY Auxiliary Terminology

Title

Introduction

Introduction

Biodiversity

- biodiversity means the diversity of living organisms of all origins
- diversity within species, between species and ecosystems
- biodiversity is defined as the variety of life in all its forms

Biodiversity

"Biodiversity means the diversity of living organisms of all origins, including, inter alia, terrestrial, marine and other aquatic ecosystems and ecological complexes of which they are a part. It also includes diversity within species, between species and ecosystems." In a few words, biodiversity is defined as the diversity of life in all its forms (plants, animals, fungi, etc.) and at all levels of its organization (genes, organisms, ecosystems).

The concept of biodiversity therefore embraces all life on Earth. It includes the way of expressing or appreciating the diversity that exists at the various levels of life organization. It reflects the number, variety and variability of living organisms and the systems that they compose.

Biodiversity Levels

Biodiversity Levels

Genetic diversity. Expresses the range of inherited ancestries of a particular species. The greater this range, the greater the species' ability to survive in the face of external pressures (stress) such as epidemics, climate adversity, etc. Natural species have a much wider range of inherited ancestry, so they show a much greater ability to adapt and survive than "artificial" or genetically improved species. In Greece, due to various factors, both plant species (especially trees) and animal species, show great genetic diversity, a fact which gives particular importance to the country as a "bank" of genes and genetic material in general, which must be investigated and maintained.

Diversity of species. It expresses the number of species (plants, animals, fungi, etc.) that can be found in a specific area or

ecosystem. Species diversity affects the ecological balance, stability and operation of the feedback mechanisms of an ecosystem. The more species involved in the composition of an ecosystem, the greater the stability of the ecosystem, the denser the network of food chains and biosystems, the smoother the biomass and energy flows and the recycling of nutrients and the better and more efficient the feedback mechanisms work. In addition, many species in their ontogenetic evolution are closely related to each other and the existence of one depends on the existence of the other. In conclusion, it is obvious that: a) the extinction of a species can have unpredictable consequences and b) sustainable management cannot be exercised without protecting and conserving the diversity of the species.

Diversity of ecosystems. Expresses the number of ecosystems that can be found in a particular area. The number of ecosystems and the way they are distributed in the space, ie the mosaic of ecosystems, characterizes the landscape of an area. The protection of ecosystems ensures not only the protection of the species that compose them but also the preservation of the physiognomy of the landscapes.

Species diversity: It expresses the number of species (plants, animals, fungi, etc.) that can be found in a specific area or ecosystem.

Ecosystem diversity: It expresses the number of ecosystems that can be found in a particular area.

Genetic diversity: It expresses the range of hereditary ancestries of a particular species.

Biodiversity Levels -Ecosystem

- These three levels correspond to the equal, fundamental and hierarchically connected

levels of life organization.

- Each level has a different meaning but in fact is an integral part of a single whole.
- The term "ecosystem" is derived from the abbreviation "ecological system".
- An ecosystem is a dynamic complex of communities of plants, animals and microorganisms, as well as elements of their abiotic environment that interact as a functional unit.

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Ecosystem

- An ecosystem has some key features:
- biotic (living) components
- abiotic components (eg water, soil, climate)

- interactions within and between the above two components, through energy flows in the physical space in which there are found and operate

Ecosystem

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interactions within and between the above two components, through energy flows in the physical space in which there are found and operate

The modern concept of ecosystem also includes the concept of "services" of the ecosystem, recognizing the benefits provided by the natural world to the humans.

Sustainability

- Sustainable use means the use of components of biological diversity
- in a manner and proportion that does not cause long-term shrinkage of biodiversity
- thus maintaining its potential to meet the needs and aspirations of present and future generations

Sustainability

Sustainable use means the use of components of biological diversity, in a manner and proportion that does not cause long-term shrinkage of biodiversity, thus maintaining its potential to meet the needs and aspirations of present and future generations.

The term also includes the concept of sustainable use of natural resources, so that the environment gives the maximum sustainable benefit to current generations, while maintaining the potential to meet the needs and expectations of future generations.

Biodiversity 1

- Why is biodiversity important?

The importance of biodiversity

Biodiversity 1

Biodiversity is essential for the preservation of life on Earth, as it is the foundation of the vast range of goods and services provided by ecosystems that make a decisive contribution to human well-being. Human decisions that affect biodiversity, affect the well-being of themselves and other organisms.

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Biodiversity 2

Biodiversity 2

It is vital to our health and well-being.

It improves our quality of life and enhances our standard of living.

It contributes to social prosperity and cohesion and offers new opportunities for investment and employment.

Biodiversity 3

Biodiversity 3

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- is vital to our health and well-being
- improves our quality of life and enhances our standard of living
- contributes to social prosperity and cohesion and offers new opportunities for investment and employment

Conclusion 1

Conclusion 1

Conclusion 2

Conclusion 2

Ecosystems

The services provided by natural ecosystems are classified into four categories:

- Productive, such as the production of food, fuel, fiber and medicine.
- Regulatory, such as regulating the quality and quantity of water, air and climate.
- Supportive / Protective, such as maintaining soil fertility and nutrient cycle, the primary production.
- Cultural / Spiritual, such as education, ecotourism, outdoor recreation.

Ecosystems

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Regulatory, such as regulating the quality and quantity of water, air and climate.

Supportive / Protective, such as maintaining soil fertility and nutrient cycle, the primary production.

Cultural / Spiritual, such as education, ecotourism, outdoor recreation.

Ecological Benefit 1

Ecological Benefit 1

- Trees and shrubs: capture of CO₂ from the atmosphere, oxygen production, soil formation, provision of habitat and food for other plants, animals, fungi and microorganisms.
- Insects, bats, birds (and other animals): Important for plant fertilization (pollinators).
- Parasites - predators: natural control of populations.

Parasites - predators

Insects, bats, birds (and other animals)

Trees and shrubs

Ecological Benefit 2

Ecological Benefit 2

- Earthworms - bacteria: recycling of soil organic matter, maintenance of soil fertility and productivity.
- Forests: retention of gaseous pollutants (key factor in reducing global climate change), modification of flood and erosion phenomena, noise suppression, support of food webs, etc.
- Wetlands: water storage, support of food webs, enrichment of underground aquifers, trapping of sediments and toxic substances, modification of flood phenomena.

Wetlands

Forests

Earthworms - bacteria

Biodiversity 1

Biodiversity at the level of species in Greece

Biodiversity 2

The number of plant species of Greece, per 10' of the degree of latitude and longitude.

Biodiversity 3

The graph concerns the characterization of endangered plant species.

Ecological Benefit

Ecological Benefit

- Food: species that are hunted, caught, collected (eg berries, mushrooms, grasses, snails), cultivated and cultivated in aquacultures.
- Fuels: wood and coal are just two examples of natural resources used for energy production.
- Housing / Protection: timber and other forest products are used as building and construction materials, fibers (eg wool, cotton) and leathers meet clothing/footwear needs.
- Medicines: natural / traditional or processed products that come from biodiversity, e.g. penicillin is produced from mold, codeine is derived from poppies, aspirin is made from willow bark (Salix alba - salicylic acid).

Medicines

Housing / Protection

Fuels

Food

Social Benefit 1

Social Benefit 1

- Research, education, monitoring: There is still a lot to learn about what and how many species exist, how to make the best use of biological resources, how to maintain the genetic basis of species, how to restore degraded ecosystems, etc. Natural areas are extremely vibrant laboratories for valuable research in various fields of life sciences (ecology, evolution, etc.).
- Leisure & tourism: Biodiversity is a hub for tourism and leisure activities, which have already expanded rapidly into natural environments and are often the main source of income for the local population. People value these areas in a variety of interests: videotaping, painting, photography, bird watching, ecological fieldwork and other scientific activities.
- Culture: The conservation of biological diversity is of particular importance for the formation of cultural identity as human cultures evolve together with their environment. It also covers many of the human needs for inspiration, aesthetics, meditation and education, for all the cultures of yesterday, today and tomorrow

Research, training and monitoring

Leisure and tourism

Culture

- Natural ecosystems and landscapes contribute to the emotional and spiritual well-being of humans.

- - The presence of a large set of living organisms reminds us that humans are only a part of the Earth and that there are interdependent relationships between organisms.
- - Landscapes reflect cultural diversity, have incorporated local history and have inspired different populations for thousands of years.

Social Benefit 2

Social Benefit 2

- Natural ecosystems and landscapes contribute to the emotional and spiritual well-being of humans.
- The presence of a large set of living organisms reminds us that humans are only a part of the Earth and that there are interdependent relationships between organisms.
- Landscapes reflect cultural diversity, have incorporated local history and have inspired different populations for thousands of years.

The real value of biodiversity, however, is incalculable, as it enables us and all living organisms to survive and adapt to a changing environment.

International studies and research converge on the fact that we are squandering the earth's natural resources and endangering the ability of ecosystems to support future generations. Whatever short-term benefits arise, they will undoubtedly be reversed by massive long-term losses. The deterioration can only be addressed if there are substantial changes in policy and practice.

Greek nature and biodiversity 1

- Greece is especially privileged, in relation to the other European countries of the European Union, in terms of biodiversity
- It bears an equally corresponding weight of moral responsibility for its maintenance, its sustainable use,
- Greece must make a fair and equitable sharing of the benefits that will result from the use of genetic resources for future generations

Greek nature and biodiversity 1

Greece is especially privileged, in relation to the other European countries of the European Union, in terms of biodiversity. It bears an equally corresponding weight of moral responsibility for its maintenance, its sustainable use and must make a fair and equitable sharing of the benefits that will result from the use of genetic resources for future generations.

- Greece is in a privileged position in relation to other European countries, in terms of biodiversity
- due to its geographical location, diverse relief,
- the diversity of its landscapes,
- the wide variety of habitats,
- the richness and extent of its cultural heritage.

Greek nature and biodiversity 2

Greek nature and biodiversity 2

Greece is in a privileged position compared to other European countries, in terms of biodiversity, due to its geographical location, diverse relief, diversity of landscapes, wide variety of habitats, as well as the richness and extent of its cultural heritage. For this reason, it bears a corresponding burden of responsibility for its conservation, its sustainable use, and an equitable sharing of benefits that will result from the use of genetic resources for future generations.

- The country is characterized by a particularly rich flora and fauna, as well as a wide variety of landscapes and ecosystems.
- One of the most important features of biodiversity in Greece is the high endemism in most animal and plant groups.
- Greece hosts great terrestrial, wetland, coastal and marine ecosystems.
- Traditionally, protected areas are considered the cornerstone of on-site biodiversity conservation

Greek nature and biodiversity 3

Greek nature and biodiversity 3

The country is characterized by particularly rich flora and fauna, as well as a wide variety of landscapes and ecosystems. Indicatively, in Greece there are about 6,600 species and subspecies of angiosperm plants and more than 23,000 species of land and freshwater animals.

One of the most important features of biodiversity in Greece is the high endemism in most animal and plant groups. Many endemic species have a very limited distribution (eg on a single islet) and are therefore very sensitive to disturbances. Greece hosts great terrestrial, wetland, coastal and marine ecosystems. In terrestrial ecosystems, forests as well as Mediterranean ecosystems (phrygana and makki) have a large area and high importance. Wetlands include lakes, swamps, lagoons, salt marshes, estuaries, etc. Coastal ecosystems include sandy shores, rocky shores, dunes, etc. and marine ecosystems include the meadows of Poseidonia. Some wetlands, such as lagoons and estuaries, are also considered coastal ecosystems.

Traditionally, protected areas have been considered the cornerstone of on-site biodiversity conservation.

Environmental footprint

Environmental footprint 1

[Learn more](#)

Environmental footprint 1

The environmental footprint is a way of measuring the effects that human activities have on Earth. It is the measure of demand and consumption that measures the coverage of the needs of a society, as well as the waste and greenhouse gases that it produces daily in areas of productive sea and land surface. It also assesses all the natural resources needed to support the material needs of a population or individual depending on the technology, the lifestyle and the habits of each country. The unit of measurement of the ecological footprint is 1 hectare, which is equal to 10 acres or 10,000 square meters respectively.

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It is the measure of demand and consumption that measures the coverage of the needs of a society

It assesses all the natural resources needed to support the material needs of a population or individual depending on the technology, the lifestyle and the habits of each country

The unit of measurement of the ecological footprint is 1 hectare

Environmental footprint 2

Environmental footprint 2

- It is a term in the field of ecology and is used as an indicator of human disturbance in the Earth's ecosystems
- It is a standard measure of the impact of people on their natural environment, in terms of consumption of natural resources and pollution
- It compares the demand for covering living needs with the ability of the planet's ecosystems to regenerate
- It represents the area of biologically productive land and sea areas required to produce the resources consumed by a human population while absorbing and inactivating the pollutants and waste it generates

Environmental footprint 3

Environmental footprint 3

Environmental (or ecological) footprint is a term in the field of ecology and is used as an indicator of human disturbance in the Earth's ecosystems. It is a standard measure of the impact of people on their natural environment, in terms of consumption of natural resources and pollution. It compares the demand for living needs with the ability of the planet's ecosystems to regenerate. It represents the area of biologically productive land and sea areas required to produce the resources consumed by a human population and at the same time to absorb and inactivate the pollutants and waste it

generates. Using this description, it is possible to estimate through scientific methods how much land (how many Earths) is needed to support the total human population with its specific way of life.

Environmental footprint 4

Environmental footprint 4

For the year 2013, the total environmental footprint of humanity was estimated at 1.5 Earths.

Both biocapacity and the ecological footprint are measured in global hectares, gha.

Gha is a common unit that comprises the average productivity of all the biologically productive land and sea on the planet, in a given year.

Environmental footprint 5

Environmental footprint 5

For the year 2013, the total environmental footprint of humanity was estimated at 1.5 Earths.

In other words, it took one and a half Earths to meet the needs of the total human population (in food, clothing, housing, etc.), in a renewable way (that is, for nature to be able to regenerate and continue to produce at the same rate). Both biocapacity and the ecological footprint are measured in global hectares, gha, a common unit that comprises the average productivity of all the world's biologically productive land and sea in a given year.

Environmental footprint 6

Environmental footprint 6

- In order to achieve a balance between the productive capacity of the planet and the requirements of its inhabitants, the environmental footprint for every human being on Earth should not exceed 1.8 gha,
- This only happens in a few, extremely poor, countries, mainly in Africa and Asia.
- Globally, the average per capita environmental footprint in 2010 was about 2.2 gha.

Environmental footprint 7

Environmental footprint 7

It has been estimated that, in order to strike a balance between the productive capacity of the planet and the requirements of its inhabitants, the environmental footprint of every human being on Earth should not exceed 1.8 gha, which occurs only in a few, extremely poor, countries, mainly Africa and Asia. However, globally, the average per capita environmental footprint in 2010 was about 2.2 gha,

Larger footprints

However, our planet, unfortunately, has only 12 billion Gha.

This difference represents in quantitative terms the "environmental problem" of our time and the impasse to which it leads if no action is taken.

Based on these figures, we estimate that the current needs of the world population in productive land are 18 billion gha.

Environmental footprint 8

Environmental footprint 8

Based on these figures, we estimate that the current needs of the world population in productive land are 18 billion gha. However, our planet, unfortunately, has only 12 billion Gha! This difference represents in quantitative terms the "environmental problem" of our time and the impasse to which it leads if no action is taken.

- Evolution of Greece's biological capacity per capita and environmental footprint from 1961 to 2011, in gha.

<http://www.footprintnetwork.org/images/trends/2015/greece.png>

Environmental footprint 9

Environmental footprint 9

The diagram shows the evolution of the environmental footprint in relation to biocapacity. The green line shows what the country has to offer for our needs while the red line shows what we consume. As can be easily seen from the diagram, from 1970 to 2008 the gap was constantly opening. In recent years there has been a gradual closing of the gap which we owe to

the change in the culture of the inhabitants and the governments which follow pro-environmental approach.

In the context of the strategic response of manufacturing companies to climate change, two factors play a very important role:

- Reducing business operating costs, with particular emphasis on reducing energy costs and the use of renewable energy sources, and,
- Reducing greenhouse gas emissions from the industry.

Environmental footprint 10

Environmental footprint 10

The issue of climate change, in no way leaves the Greek and especially the Greek manufacturing companies indifferent. Of course, we must recognize that the issue of climate change adaptation is something that is long-term. However, the benefit, both at the national economy and at the company level, is clearly greater than the corresponding adjustment costs. In the context of the strategic response of manufacturing companies to climate change, two factors play a very important role:

1. Reducing the operating costs of businesses, with particular emphasis on reducing energy costs and the use of renewable energy sources, and,
2. Reducing greenhouse gas emissions from the industry.

Let us focus on the second factor, namely the reduction of greenhouse gas emissions. I note from the beginning that the environmental footprint is an important factor in enhancing the competitiveness of a manufacturing company in

international markets.

Environmental footprint 11

Environmental footprint 11

- Reducing the environmental footprint is a "horizontal technology" of high priority.
- This action is considered extremely critical in the effort of companies to open up to new markets.
- There are demanding foreign markets such as the United States and the United Kingdom that demand it.

Environmental footprint 12

Environmental footprint 12

Reducing the environmental footprint, as a process of adaptation to climate change, is a "horizontal technology" of high priority for the majority of manufacturing companies.

This action is considered extremely crucial in the effort of companies to open up to new markets, since many demanding foreign markets such as the United States and the United Kingdom, require from the companies that sell their products in these markets a carbon footprint certificate.

Conclusion

Environmental footprint 13

Environmental footprint 13

It is thus understood that these specific countries set artificial entry barriers for products such as -for example- food, which are a key part of Greek exports, thus imposing an indirect protectionism for domestically produced products respectively / in these specific countries.

The environmental footprint can obviously refer to different environmental impacts (eg carbon dioxide emissions, drinking water consumption, etc.) and be direct, ie it results directly from the operation of the business (for example carbon dioxide emitted by the operation of a company's factory) or indirect, ie it arises from third party resources used by the company.

It is thus understood that these specific countries set artificial entry barriers for products

The environmental footprint can obviously refer to different environmental impacts (eg carbon dioxide emissions, drinking water consumption, etc.)

It can also be direct or indirect.

- Nowadays, carbon dioxide (CO₂) footprint measurement, and in particular carbon dioxide equivalent (CO₂e) emissions measurement, has largely prevailed.
- This measurement has been accepted as the global unit for measuring global warming
- An attempt should be made to measure the carbon footprint in entire value-added chains.

Environmental footprint 14

In any case, nowadays, carbon footprint measurement (CO₂), and in particular carbon dioxide equivalent (CO₂e) emissions measurement, has largely prevailed, a measure that has been accepted as the global unit for measuring global warming and that summarizes all the individual gases associated with the greenhouse effect.

An attempt should be made to measure the carbon footprint in entire value-added chains so that there is a holistic approach to measuring and reducing the carbon footprint. In any case, the current bad economic situation is obviously creating obstacles to secure sufficient capital which with proper use will contribute to the policy of mitigation and adaptation of our country and businesses to what may happen due to climate change.

However, any policy package that will apply from now on regarding this issue should be seen and used as an opportunity for the development of new activities, and therefore development, thus contributing to facing the economic crisis and to creating the new development model for Greece.

Environmental footprint 15

Environmental footprint 15

Reduction of carbon dioxide emissions

- The ecological footprint is a resource management tool that measures the impact of human activities on the natural environment
- This tool assesses the productive area needed by an individual, a product or a total population, to meet its needs for consumption and absorption of generated waste.

- Thus, the ecological footprint can be measured (quantified) in "units of area" per inhabitant.

Environmental footprint 16

Environmental footprint 16

Thus, the ecological footprint described below is a resource management tool, which measures the impact of human activities on the natural environment and which can also measure the environmental impact of various products. This tool assesses the productive area needed by an individual, a product or a total population, to meet its needs for consumption and absorption of generated waste.

Thus, the ecological footprint can be measured (quantified) in "units of area" per resident. A "unit of area" is a productive hectare. Consequently, the ecological footprint is expressed in hectares per resident (ha / resident), when the relevant measurement is made at national level, and in global hectares per resident (gha / resident), when the specific measurement is converted, through various factors, in global level.

- In the assessment of the ecological footprint, five (5) large categories of consumer products are taken into account:

Environmental footprint 17

Environmental footprint 17

In the assessment of the ecological footprint, five (5) large categories of consumer products are taken into account: food, housing, transport, forests and services. The annual consumption of these categories, including waste and water disposal, allows us to know, thanks to specific factors, the corresponding area. There are many different conversion rates of energy consumed into an ecological footprint.

Services

Forests

Transport

Housing

Food

Environmental footprint 18

Environmental footprint 18

The ecological footprint of 3 Mediterranean countries: Greece, Spain, Egypt. We observe that the ecological footprint of Greece is 4.41 gha / capita while that of Athens is 4.84 gha / capita. The two main elements that burden the ecological footprint in Greece are transport and food. In Spain the ecological footprint is 4.05 gha per person and finally in Egypt it is only 1.79 gha per capita. In both these countries, food and transport are the main elements. We find that the ecological footprint translated into global hectares is larger in the capitals than at the country level. This is because most of the population of these countries lives and works in their capitals.

- The ecological footprint can be considered an indicator that allows the accumulation of different measurements in a single result,
- It allows them to be compared with various programs and actions,
- It does not take into account certain influences, such as biodiversity degradation
- The first attempt to approach the ecological footprint (Ecological Footprint - EF) was made in the early 1990s.

Environmental footprint 19

Environmental footprint 19

The ecological footprint can be considered an indicator that allows the accumulation of different measurements in a single result and their comparison with various programs and actions, while it should be noted that it does not take into account certain influences, such as biodiversity degradation, which can be calculated through other measurements and can be included in the final result, under certain conditions.

The first attempt to approach the ecological footprint (Ecological Footprint - EF) was made in the early 1990s.

Green Marketing

Green Marketing 1

Click on the image

[Click on the image and learn more about green marketing](#)

Green Marketing 1

The idea of environmental protection first appeared in the mid-1960s in the United States. This movement led to the creation of the Council on Environmental Quality, the Department of Environmental Protection, and the creation of many environmental laws during the 1970s. Because of all this, the US turned into pioneers in environmental reform since they

were the first to show the necessary interest and sensitivity in the matter. Green marketing began in the late 1980s and early 1990s.

The idea of environmental protection first appeared in the mid-1960s in the United States.

This movement led to the creation of the Council on Environmental Quality and the creation of many environmental laws during the 1970s.

This movement led to the creation of the Council on Environmental Quality and the creation of many environmental laws during the 1970s.

Green marketing began in the late 1980s and early 1990s.

Click on the image

Click on the image and learn more about green marketing

Green Marketing 2

Green Marketing 2

The second attempt to reconcile the public with the idea of green marketing began in the late 1990s, in a much more organized manner and with more positive results. These efforts led to the creation of a global "green" movement, which exists to this day. Society, citizens, social groups and businesses have begun to increasingly take into account the impact and issues that concern the environment and to prioritize everything that has to do with finding a solution to this problem.

The second attempt to reconcile the public with the idea of green marketing began in the late 1990s. This time, in a much more organized manner and with more positive results.

These efforts led to the creation of a global "green" movement, which exists to this day.

Society, citizens, social groups and businesses have begun to increasingly take into account the impact on the environment.

Click on the image

Click on the image and learn more about green marketing

Green Marketing 3

Green Marketing 3

However, we must not forget the Kyoto Protocol, which entered into force on 16 February 2005. This Protocol is an agreement between 183 countries, including Greece, which aims to reduce the harmful pollutants that contribute to the creation of the ozone hole, to a point that they are environmentally sustainable. Through various processes and mechanisms, each of the 183 countries must control and ultimately reduce as many environmental pollutants as possible. Since 2005, Europe has reduced its total emissions by 8%, the US by 7%, Japan by 6% and Russia by 0%.

In this context, the Kyoto Protocol came into force on 16 February 2005.

This Protocol is an agreement between 183 countries, including Greece, which aims to reduce the harmful pollutants.

Through various processes and mechanisms, each of the 183 countries must control and ultimately reduce as many environmental pollutants as possible.

Since 2005, Europe has reduced its total emissions by 8%, the US by 7%, Japan by 6% and Russia by 0%.

- In the process of change and adaptation to the new conditions, Greece followed a slow but steady pace.
- During 1980, when the first wave of "green marketing" struck, Greece was practically uninvolved.
- In the second wave, Greece began to read the signs of environmental catastrophe. As a result, there was an immediate mobilization on its part in this global movement.

Green Marketing 4

Green Marketing 4

In the process of change and adaptation to the new conditions, Greece followed a slow but steady pace. During 1980, when the first wave of "green marketing" struck, Greece was practically uninvolved. In the second wave, Greece began to read the signs of environmental catastrophe. As a result, there was an immediate mobilization on its part in this global movement. This happened because several important multinational companies operating in the country passed on to the local community the principles and values of green entrepreneurship, ecology and the green mentality in general.

- This increase in mobilization and the immediate response that existed in Europe,

especially in the business sector, is an important topic of study for many.

- Ecology, ecological consciousness and green development are ideas that must be analyzed and assimilated by all citizens.
- Especially in the business sector, which plays an important role in the daily life of consumers in a society.

Green Marketing 5

Green Marketing 5

This increasing mobilization and the immediate response in Europe, especially in the business sector, is the central subject of this work. The ways and methodology used have been observed in other surveys of foreign companies.

Ecology, ecological consciousness and green development are ideas that must be analyzed and assimilated by all citizens.

Especially in the business sector, which plays an important role in the daily life of consumers in a society

According to the American Marketing Association, "green marketing" is the marketing that designs and creates environmentally safe products. Green marketing includes a series of actions, based on the following steps:

Green Marketing 6

Green Marketing 6

According to the American Marketing Association, "green marketing" is the marketing that designs and creates environmentally safe products. Green marketing includes a series of actions, based on the following steps. Product design, alternative production line, environmentally friendly packaging and of course the re-evaluation of the advertising process. There is no single definition for green marketing because it simply could not contain all the elements that are included in it.

Re-evaluation of the advertising process

Product design

Alternative production line

Environmentally friendly packaging

Environmentally friendly packaging

Product design

Alternative production line

Alternative production line

Product design

Product design

- You will surely wonder how marketing and ecology can coexist as one,
- Especially since the one side pushes you to consume more and more every day while the other pushes you to consume less.
- Marketing contributes to the creation of trends that will include ecology and ecological awareness.
- Everyday life has reached such a point that it is necessary for everyone to follow these trends, without exception.

Green Marketing 7

Green Marketing 7

You will surely wonder how marketing and ecology can coexist as one, especially since the one side pushes you to consume more and more every day while the other pushes you to consume less. Marketing contributes to the creation of trends that will include ecology and ecological awareness. Everyday life has reached such a point that it is necessary for everyone to follow these trends, without exception.

- Sustainability is much more than an idea that includes goals and guidelines that do not oppose to a country's economic development.
- It is a step closer to the rationale and trends promoted by modern marketing.
- Anything related to development, modernization and sustainability contributes to the direction set by green marketing and has a longer lifespan.

Green Marketing 8

Green Marketing 8

We mentioned the word "sustainability" above. Sustainability is more than just an idea that includes goals and guidelines that do not oppose to a country's economic development. It is a step closer to the rationale and trends promoted by modern marketing. Anything related to development, modernization and sustainability contributes to the direction set by green marketing and has a longer lifespan.

Green marketing practices create opportunities to engage people and promote a green lifestyle.

On the other hand, there is also an air of innovation in the way businesses operate.

In addition, they manage to achieve the goals they have set while building trust relationships with their customers.

Green Marketing 9

Green Marketing 9

“Green marketing practices create opportunities to engage people and promote a green lifestyle. On the other hand, there is also an air of innovation in the way businesses operate, while at the same time they manage to achieve the goals they have set while building trust relationships with their customers.” – (Grantj. 2007, σ.11)

- The car brand Volvo has developed a sustainable environment with renewable energy sources, replacing natural gas with biogas to heat the plant.
- After an agreement with VattenfallAB (of Swedish origin), Volvo managed to find a reliable power supplier for its production line.

- In addition, the company renewed its policy, so that all products and services it produces, as well as the way their offices and factories operate, are environmentally oriented.

Green Marketing 10

Green Marketing 10

The car brand Volvo has developed a sustainable environment with renewable energy sources, replacing natural gas with biogas to heat the plant. After an agreement with VattenfallAB (of Swedish origin), Volvo managed to find a reliable power supplier for its production line. In addition, the company renewed its policy, so that all products and services it produces, as well as the way their offices and factories operate, are environmentally oriented.

. (volvocars.com)

- The electrical company Sony experienced a nightmare.
- The Dutch government banned the import of 1.5 million Playstation consoles destined for Europe.
- The reason: The whole production had a small amount of cadmium in its cables.
- With very quick moves the company tried and managed to remove those harmful cables from almost the entire production.

Green Marketing 11

Green Marketing 11

The electrical company Sony experienced a nightmare. The Dutch government banned the import of 1.5 million Playstation consoles destined for Europe. The reason: The whole production had a small amount of cadmium in its cables. With very quick moves the company tried and managed to remove those harmful cables from almost the entire production.

- But the cost to Sony was double, as not only had to spend \$ 130 million dollars to replace the consoles, but also lost its credibility and prestige among consumer public.
- Company executives radically changed their strategy and decided to pursue stricter policies regarding environmental protection.
- The moral of the story is that even a giant company, such as Sony, will be severely affected if it ignores even the smallest detail.
- Ecology, ecological consciousness and green development are concepts that we should all consider as active members of a society

Green Marketing 12

Green Marketing 12

But the cost to Sony was double, as not only had to spend \$ 130 million dollars to replace the consoles, but also lost its credibility and prestige among consumer public. Since that moment, company executives radically changed their strategy and decided to pursue stricter policies regarding environmental protection. The moral of the story is that even a giant company, such as Sony, will be severely affected if it ignores even the smallest detail.

Ecology, ecological consciousness and green development are concepts that we should all consider as active members of a society.

From the above case there are three conclusions:

Conclusion 1

Conclusion 2

Conclusion 3

Green Marketing 13

Green Marketing 13

From the above case there are three conclusions:

- Even the best companies can make mistakes and / or ignore important elements that concern environmental safety.
- Protecting the environment and the citizens is not a negligible issue in the business world.
- Can any company gain enough benefits from "green" entrepreneurship? Enough to see some processes from a renewed perspective.

Any company can gain enough benefits from "green" entrepreneurship. Enough to see some processes from a renewed perspective.

Protecting the environment and the citizens is not a negligible issue in the business world.

Even the best companies can make mistakes and / or ignore important elements that concern environmental safety.

- It is necessary for the companies to have constant access and knowledge of the latest

and most attractive market trends.

- Such trends are discovered by continuous research on consumers' buying behavior.
- Besides, the products and services provided by the companies follow the path of the trends.
- Today's consumers consider the destruction of the environment and its negative consequences in the long run more important than the products they consume.

Green Marketing 14

Green Marketing 14

It is necessary for the companies to have constant access and knowledge of the latest and most attractive market trends. Such trends are discovered by continuous research on consumers' buying behavior. Besides, the products and services provided by the companies follow the path of the trends. Today's consumers consider the destruction of the environment and its negative consequences in the long run more important than the products they consume.

- Companies meet the demands of their consumers using "green" promotion and production strategies.
- They also gain ground over their competitors but also a larger, more satisfied, and loyal customer base.

- The idea of green marketing pushes businesses to follow renewed ecological practices when dealing with consumers, traders, suppliers and employees.
- To date, the percentage of companies that appear to be "environmentally friendly" is growing rapidly.

Green Marketing 15

Green Marketing 15

For this reason, companies meet the demands of their consumers using "green" promotion and production strategies, while at the same time they gain ground over their competitors but also a larger, more satisfied, and loyal customer base. The idea of green marketing pushes businesses to follow renewed ecological practices when dealing with consumers, traders, suppliers and employees.

To date, the percentage of companies that appear to be "environmentally friendly" is growing rapidly.

Environmental marketing has been perceived by various companies as an opportunity to achieve their goals.

It is generally accepted that companies have a moral obligation to serve society in more environmentally friendly ways.

The prices of these products can be adjusted with carefully designed strategies and standards.

One of the factors influencing the purchase of ecological products is the difference in price compared to traditional products on the market.

Green Marketing 16

Green Marketing 16

According to Michael J. Polonsky, environmental marketing has been perceived by a variety of companies as an opportunity to achieve their goals. It is generally accepted that companies have a moral obligation to serve society in more environmentally friendly ways. One of the factors influencing the purchase of ecological products is the difference in price compared to traditional products on the market. The prices of these products can be adjusted with carefully designed strategies and standards.

Question Bank 1

Unit 1

1 Biodiversity

1.1 Title

1.2 Introduction
1.3 Biodiversity
1.4 Biodiversity Levels
1.5 Biodiversity Levels - Ecosystem
1.6 Ecosystem
1.7 Sustainability
1.8 Biodiversity 1
1.9 Biodiversity 2
1.10 Biodiversity 3
1.11 Conclusion 1
1.12 Conclusion 2
1.13 Ecosystems
1.14 Ecological Benefit 1

1.15 Ecological Benefit 2
1.16 Biodiversity 1
1.17 Biodiversity 2
1.18 Biodiversity 3
1.19 Social Benefit
1.20 Social Benefit 1
1.21 Social Benefit 2
1.22 Greek nature and biodiversity 1
1.23 Greek nature and biodiversity 2
1.24 Greek nature and biodiversity 3
2 Environmental footprint
2.1 Environmental footprint 1
2.2 Environmental footprint 2

2.3 Environmental footprint 3
2.4 Environmental footprint 4
2.5 Environmental footprint 5
2.6 Environmental footprint 6
2.7 Environmental footprint 7
2.8 Larger footprints
2.9 Environmental footprint 8
2.10 Environmental footprint 9
2.11 Environmental footprint 10
2.12 Environmental footprint 11
2.13 Environmental footprint 12
2.14 Environmental footprint 13
2.15 Environmental footprint 14

2.16 Environmental footprint 15
2.17 Environmental footprint 16
2.18 Environmental footprint 17
2.19 Environmental footprint 18
2.20 Environmental footprint 19
3 Green Marketing
3.1 Green Marketing 1
3.2 Green Marketing 2
3.3 Green Marketing 3
3.4 Green Marketing 4
3.5 Green Marketing 5
3.6 Green Marketing 6
3.7 Green Marketing 7

3.8 Green Marketing 8
3.9 Green Marketing 9
3.10 Green Marketing 10
3.11 Green Marketing 11
3.12 Green Marketing 12
3.13 Green Marketing 13
3.14 Green Marketing 14
3.15 Green Marketing 15
3.16 Green Marketing 16



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Ecofriendly Business

Eco-friendly Business

Unit 2 (a): What is ECO-FRIENDLY; Current situation in the EU

Title

Term "Eco-friendly" 1

Term "Eco-friendly" 1

- In recent years, terms such as "green" and "eco-friendly" have become word of mouth in shows, advertisements and product packaging.
- The term "eco-friendly" has been used for so many products and practices that its meaning is in danger of being lost.
- By understanding the true meaning of eco-friendly, you can apply practices that will lead to a healthier life for the planet and its residents, young and old.

- Eco-friendly literally means earth-friendly or not environmentally harmful.
- This term usually refers to products that contribute to green living or to practices that help conserve resources such as water and energy.
- Eco-friendly products also prevent the contribution to air, water and soil pollution.
- They can participate in eco-friendly habits or practices, having a greater awareness of how resources are used.

Term "Eco-friendly" 2

Term "Eco-friendly" 2

Eco-friendly literally means earth-friendly or not environmentally friendly. This term usually refers to products that contribute to green living or to practices that help conserve resources such as water and energy. Eco-friendly products also prevent the air, water and soil pollution. They can engage in environmentally friendly habits or practices with a greater awareness of how to use resources.

Term "Eco-friendly" 3

- The construction of a truly eco-friendly product keeps in mind both environmental and human safety.
- At least the product is non-toxic.
- Other environmentally friendly features include the use of sustainable cultivated or augmented ingredients, produced in ways that do not damage the ecosystem.
- Organic ingredients or materials are developed without toxic pesticides or herbicides.

Term "Eco-friendly" 3

The construction of a truly eco-friendly product keeps in mind both environmental and human safety. At least the product is non-toxic. Other environmentally friendly features include the use of sustainable cultivated or augmented ingredients, produced in ways that do not damage the ecosystem. Organic ingredients or materials are developed without toxic pesticides or herbicides. Products created with "recycled materials" contain glass, wood, metal or plastic that is recovered from waste and made into something new. Biodegradable products are degraded through natural decomposition, which puts burdens less landfills and the ecosystem as a whole.

Term "Eco-friendly" 4

- With that as fact, in a relevant Eurobarometer survey, 94% of citizens in all EU Member States state that environmental protection is important to them.
- In addition, 91% of citizens said that climate change is a serious problem in the EU.
- European legislation is necessary to protect the environment, according to 83% of the respondents.

Term "Eco-friendly" 4

With that as fact, in a relevant Eurobarometer survey, 94% of citizens in all EU Member States state that environmental protection is important to them. In addition, 91% of citizens said that climate change is a serious problem in the EU. European legislation is necessary to protect the environment, according to 83% of the respondents.

- Eurobarometer survey shows that citizens want more to be done to protect the environment
- They believe that the responsibility should be shared among large companies and industry, national governments and the EU, as well as the citizens themselves.
- Citizens surveyed believe that the most effective way to deal with environmental problems is to "change the way we consume" and "change the way we produce and conduct our commercial transactions".

Eurobarometer survey

Eurobarometer survey 1

Eurobarometer survey shows that citizens want more to be done to protect the environment, and that they believe that the responsibility should be shared among large companies and industry, national governments and the EU, as well as the citizens themselves. Citizens surveyed believe that the most effective way to deal with environmental problems is to "change the way we consume" and "change the way we produce and conduct our commercial transactions".

1

2

3

Eurobarometer survey 2

Eurobarometer survey 2

More than eight out of ten people are worried about the effects of chemicals on everyday products.

More than three quarters (78%) of the respondents believe that environmental issues have a direct impact on their daily lives and health.

Climate change, air pollution and waste are the three most important environmental issues, according to the research findings.

- Citizens recognize that fundamental change may be required.
- From the answers given by more than 27,000 respondents, there is solid support for all the proposed measures aimed at reducing plastic waste and waste generation.
- The findings also show that citizens believe that products should be designed in a way that facilitates the recycling of plastics.

Eurobarometer survey 3

Eurobarometer survey 3

Citizens recognize that fundamental change may be required. From the answers given by more than 27,000 respondents, there is solid support for all the proposed measures aimed at reducing plastic waste and waste generation. The findings also show that citizens believe that products should be designed in a way that facilitates the recycling of plastics. Industry and retailers should make efforts to reduce plastic packaging, individuals should be trained in order to reduce their plastic waste and local authorities should provide more and better collection facilities for plastic waste.

- The survey also examined attitudes towards the clothing industry and found high levels of concern about environmental issues and working conditions.
- Respondents express a desire for clothing that lasts longer and is made from recyclable materials.
- Finally, support was expressed for other measures, such as investment in research and development, better information and education, encouraging businesses to engage in sustainable activities and stricter legislative control.

Eurobarometer survey 4

Eurobarometer survey 4

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How Important Is Environmental Protection

How Important Is Environmental Protection

How Important Is Environmental Protection

Eco-friendly Business 1

Eco-friendly Bussines

This diagram shows what the main source of information regarding the environment is. The answers are dominated by television, the internet and documentaries.

What Are The Most Important Environmental Issues

What Are The Most Important Environmental Issues

This diagram shows what the most important environmental issues are. Climate change and air pollution predominate.

Degree of Concern for Environmental Impact Issues

Degree of Concern for Environmental Impact Issues

Degree of Concern for Environmental Impact Issues

ECO-FRIENDLY BUSINESS 2

ECO-FRIENDLY BUSINESS 2

This diagram shows which ways of dealing with the impact on the environment are considered the most effective. By far the most important is the change of the way we consume but also the change of the way of production and marketing.

ECO-FRIENDLY BUSINESS 3

ECO-FRIENDLY BUSINESS 3

This diagram shows that survey participants expect more from big businesses, industries and governments, while they agree that they themselves need to do more.

The Problem of Environmental Protection

The Problem of Environmental Protection

From this diagram it is clear that the problem of environmental protection is not national but European.

ECO-FRIENDLY BUSINESS 4

ECO-FRIENDLY BUSSINES 4

Citizens believe that the EU and non-EU countries should improve their environmental standards.

Circular Economy

Circular Economy 1

Circular Economy 1

- By 2050 people will be consuming for three planets.
- Global consumption of materials such as biomass, fossil fuels, metals and minerals is expected to double in the next 40 years while annual waste production is projected to increase by 70% by 2050.

- 50% of total greenhouse gas emissions and more than 90% of biodiversity loss and water resource pressure are due to resource extraction and treatment.

- The upgrade of circular economy from the pioneers to the key economic factors:
- will make a decisive contribution to achieving climate neutrality by 2050
- will disconnect economic development from resource use, while ensuring the EU's long-term competitiveness without leaving anyone behind

Circular Economy 2

Circular Economy 2

The upgrade of the circular economy from the pioneers to the key economic factors:
will make a decisive contribution to achieving climate neutrality by 2050
will disconnect economic development from resource use, while ensuring the EU's long-term competitiveness without leaving anyone behind.

- To fulfill this ambition, the EU must move towards maintaining resource consumption within the planet's limits
- Make efforts to reduce the consumption footprint and double the rate of the use of

circular materials over the next decade.

Circular Economy 3

Circular Economy 3

To fulfill this ambition, the EU must move towards maintaining resource consumption within the planet's limits. It must also make efforts to reduce the consumption footprint and double the rate of use of circular materials over the next decade.

- As far as companies are concerned, cooperation in creating the framework for sustainable products will offer new opportunities inside and outside the EU.
- This progressive but irreversible transition to a sustainable economic system is an integral part of the EU's new industrial strategy.

Circular Economy 4

Circular Economy 4

As far as companies are concerned, cooperation in creating the framework for sustainable products will offer new

opportunities inside and outside the EU. This progressive but irreversible transition to a sustainable economic system is an integral part of the EU's new industrial strategy.

- According to a recent study, the application of the principles of the circular economy in the EU economy provides the possibility of increasing the EU GDP by an additional 0.5% by 2030, creating about 700,000 new jobs.

Circular Economy 5

Circular Economy 5

According to a recent study, the application of the principles of the circular economy in the EU economy provides the possibility of increasing the EU GDP by an additional 0.5% by 2030, creating about 700,000 new jobs.

- There is clear business interest in individual businesses as well: as manufacturing companies in the EU spend on average about 40% on materials, closed-loop models can increase their profitability by protecting them from resource price fluctuations.

Circular Economy 6

Circular Economy 6

There is clear business interest in individual businesses as well: as manufacturing companies in the EU spend on average about 40% on materials, closed-loop models can increase their profitability by protecting them from resource price fluctuations.

How Circular Economy Works

How Circular Economy Works

How Circular Economy Works

- The circular economy, taking advantage of the single market and the potential of digital technologies,
- can strengthen the EU's industrial base and promote creation and entrepreneurship among SMEs.

Circular Economy 7

Circular Economy 7

The circular economy, taking advantage of the single market and the potential of digital technologies, can strengthen the EU's industrial base and promote creation and entrepreneurship among SMEs.

- Innovative models based on developing a closer relationship with consumers,
- will accelerate not only the circularity but also the dematerialization of our economy,
- reducing Europe's dependence on raw materials.

Innovative models of circular economy

Innovative models of circular economy

Innovative models based on developing a closer relationship with consumers, will accelerate not only the circularity but also the dematerialization of our economy, reducing Europe's dependence on raw materials.

Stages of Linear Economy

Stages of Linear Economy

Stages of Linear Economy

- As far as citizens are concerned, the circular economy will provide
- functional, safe and high quality products,
- which will be cost-effective and affordable,
- They last longer and will be designed for reuse,
- repair and high quality recycling.

The Circular Economy Provides 1

The Circular Economy Provides 1

As far as citizens are concerned, the circular economy will provide functional, safe and high quality products, which will be cost-effective and affordable and will last longer and be designed for reuse, repair and high quality recycling.

Stages of Circular Economy

Stages of Circular Economy

The diagram represents the stages of circular economy :
Sources

Supply
Production
Disposal
Waste
Recycling

1

2

3

The Circular Economy Provides 2

The Circular Economy Provides 2

innovative jobs and upgraded knowledge and skills,

product models as a service and digital solutions will create a better quality of life,

A whole new range of sustainable services,

- The circular economy provides a future-oriented agenda for achieving a cleaner and more competitive Europe, in collaboration with economic actors, consumers, citizens and civil society organizations.

The Circular Economy Provides 3

The Circular Economy Provides 3

The circular economy provides a future-oriented agenda for achieving a cleaner and more competitive Europe, in collaboration with economic actors, consumers, citizens and civil society organizations.

Mixture of sustainable development

Mixture of sustainable development

This diagram shows the mixture of sustainable development. It is a subset of the economy, the environment and society.

4

The Goal of Circular Economy

The Goal of Circular Economy

"Biodiversity means the diversity of living organisms of all origins, including, inter alia, terrestrial, marine and other aquatic ecosystems and ecological complexes of which they are a part. It also includes diversity within species, between species and ecosystems." In a few words, biodiversity is defined as the diversity of life in all its forms (plants, animals, fungi, etc.) and at all levels of its organization (genes, organisms, ecosystems).

The concept of biodiversity therefore embraces all life on Earth. It includes the way of expressing or appreciating the diversity that exists at the various levels of life organization. It reflects the number, variety and variability of living organisms and the systems that they compose.

and on the other hand maximizing the new opportunities that will arise from the transition, while minimizing the burdens on citizens and businesses.

This will ensure, on the one hand, the optimization of the regulatory framework to make it suitable for a sustainable future,

with parallel utilization of the circular economy actions implemented after 2015.

The aim is to accelerate the transformational change required under the Europe Green Deal,

Differences between linear and circular economy

Differences between linear and circular economy

- The plan presents a set of interlinked initiatives to establish a strong and coherent policy framework
- which will make sustainable products a common practice,
- Sustainable services and sustainable business models
- will be transformed into consumption patterns so that waste is not generated in the first place.

Circular Economy Plan

Circular Economy Plan

The plan presents a set of interlinked initiatives to establish a strong and coherent policy framework which will make sustainable products a common practice, sustainable services and sustainable business models will be transformed into consumption patterns so that waste is not generated in the first place.

1

2

3

Policy framework 1

Policy framework 1

The EU's capacity to take responsibility for its waste will also be strengthened.

Further measures will be taken to reduce waste and ensure that the EU has a sound internal market for high quality secondary raw materials.

This policy framework will be implemented gradually, and value chains will be addressed as a matter of priority.

- Europe will not achieve transformational change on its own.
- The EU will continue to show the way to a global cyclical economy using its influence, expertise and financial resources to achieve the 2030 Sustainable Development Goals.

Policy framework 2

Policy framework 2

Europe will not achieve transformational change on its own. The EU will continue to show the way to a global cyclical economy using its influence, expertise and financial resources to achieve the 2030 Sustainable Development Goals.

- This also aims to ensure that the circular economy works for citizens, regions and cities,
- fully contributes to climate neutrality and offers opportunities for research, innovation and digitization.
- It provides actions for further development of a strong monitoring framework, which will help measure prosperity beyond GDP.

Purpose of the EU

Purpose of the EU

It also aims to ensure that the circular economy works for citizens, regions and cities, contributes fully to climate neutrality and offers opportunities for research, innovation and digitization.
It also provides actions for the further development of a strong monitoring framework, which will help to measure prosperity beyond GDP.

- up to 80% of the environmental impact of the products is determined at the design stage
- the linear model "purchase-production-use-disposal"

- does not provide producers with sufficient incentives to make their products more circular.

Design of sustainable products 1

Design of sustainable products 1

Even though up to 80% of the environmental impact of the products is determined at the design stage, the linear model "purchase-production-use-disposal" does not provide producers with sufficient incentives to make their products more circular.

Design of sustainable products 2

Design of sustainable products 2

Many products get damaged too quickly, cannot be easily reused, repaired or recycled, and many are for single use only. At the same time, the single market provides the EU with a critical mass enabling it to set global standards in the field of product sustainability and to influence product design and value chain management globally.

- Some EU initiatives and legislation already cover,
- to some extent, aspects of product sustainability, on a mandatory or optional basis.
- In particular, the Ecodesign Directive
- successfully regulates the energy efficiency and certain cyclic characteristics of energy-related products.

EU Initiatives and Legislation

EU Initiatives and Legislation

Some EU initiatives and legislation already cover, to some extent, aspects of product sustainability, on a mandatory or optional basis. In particular, the Ecodesign Directive successfully regulates the energy efficiency and certain cyclic characteristics of energy-related products.

- Parallel instruments such as the EU Ecolabel or the EU Green Public Procurement Criteria (GPP)
- have a wider scope but reduced impact due to the limitations imposed by the optional approaches.
- In fact, there is no comprehensive set of requirements to ensure that all products placed

on the Union market become more and more sustainable and meet the conditions of circularity.

Parallel Instruments

Parallel Instruments

Parallel instruments such as the EU Ecolabel or the EU Green Public Procurement Criteria (GPP) have a wider scope but reduced impact due to the limitations imposed by the optional approaches.

In fact, there is no comprehensive set of requirements to ensure that all products placed on the Union market become more and more sustainable and meet the conditions of circularity.

In order to make products suitable and resource efficient for the circular economy, the Commission will present a legislative initiative for a sustainable products policy.

Design of sustainable products 3

Design of sustainable products 3

In order to make products climate-neutral and resource-efficient regarding resources and circular economy, to reduce waste

and to ensure that the performance of pioneers in sustainability is a progressively common practice, the Commission will present a legislative initiative for a sustainable product policy.

Legislative Initiative For A Sustainable Products Policy 1

Legislative Initiative For A Sustainable Products Policy 1

- At the core of this legislative initiative
 - there will be an extension of the Ecodesign Directive beyond energy-related products,
 - so that the framework for ecological design can be applied to the widest possible range of products and meet the requirements of circularity.
-
- The Commission, in the context of the legislative initiative and, where appropriate,
 - through complementary legislative proposals, will consider establishing sustainability principles
 - and other appropriate ways of regulating the following aspects.

Legislative Initiative For A Sustainable Products Policy 2

Legislative Initiative For A Sustainable Products Policy 2

The Commission, in the context of the legislative initiative and, where appropriate, through complementary legislative proposals, will consider establishing sustainability principles and other appropriate ways of regulating the following aspects.

- improvement of durability, reusability,
- the possibility of upgrading and repairing, examination of the presence of hazardous chemicals in the products
- and increased energy efficiency and resource efficiency,
- increase of the recycled content of products, while ensuring their performance and safety

Legislative Initiative For A Sustainable Products Policy 3

Legislative Initiative For A Sustainable Products Policy 3

improvement of durability, reusability, the possibility of upgrading and repairing, examination of the presence of hazardous chemicals in the products and increased energy efficiency and resource efficiency

increase of the recycled content of products, while ensuring their performance and safety

- possibility of reconstruction and high quality recycling
- reduction of carbon footprint and environmental footprint
- limiting disposable products and addressing premature depreciation
- imposing a ban on the destruction of unsold durable goods

Legislative Initiative For A Sustainable Products Policy 4

Legislative Initiative For A Sustainable Products Policy 4

- possibility of reconstruction and high quality recycling
- reduction of carbon footprint and environmental footprint
 - limiting disposable products and addressing premature depreciation
- imposing a ban on the destruction of unsold durable goods

encouraging the "product as a service" model or other models

3

in which the producers retain ownership of the product or responsibility for its performance during its life cycle

1

START

Legislative Initiative For A Sustainable Products Policy 5

Legislative Initiative For A Sustainable Products Policy 5

"Biodiversity means the diversity of living organisms of all origins, including, inter alia, terrestrial, marine and other aquatic ecosystems and ecological complexes of which they are a part. It also includes diversity within species, between species and ecosystems." In a few words, biodiversity is defined as the diversity of life in all its forms (plants, animals, fungi, etc.) and at all levels of its organization (genes, organisms, ecosystems).

The concept of biodiversity therefore embraces all life on Earth. It includes the way of expressing or appreciating the diversity that exists at the various levels of life organization. It reflects the number, variety and variability of living organisms and the systems that they compose.

- mobilization of the possibilities offered by the digitization of information
- regarding products, including solutions such as digital passports, labeling and watermarks
- rewarding products based on their different sustainability performance, including linking high performance levels to incentives.

Legislative Initiative For A Sustainable Products Policy 6

Legislative Initiative For A Sustainable Products Policy 6

mobilization of the possibilities offered by the digitization of information regarding products, including solutions such as digital passports, labeling and watermarks
rewarding products based on their different sustainability performance, including linking high performance levels to incentives.

- Priority will be given to the examination of product groups from the whole of the value chains presented in this action plan,
- such as electronics, ICT and textiles, as well as furniture and high-impact intermediate goods such as steel, cement and chemicals.

- Further groups will be identified based on their environmental impact and circularity potential

Legislative Initiative For A Sustainable Products Policy 7

Legislative Initiative For A Sustainable Products Policy 7

Priority will be given to the examination of product groups from the whole of the value chains presented in this action plan, such as electronics, ICT and textiles, as well as furniture and high-impact intermediate goods such as steel, cement and chemicals.

Further groups will be identified based on their environmental impact and circularity potential.

- This legislative proposal and any other complementary regulatory or optional approach
- will be developed in a way that improves coherence with existing means of regulating products at different stages of their life cycle.
- The Commission's purpose is that the future broader policy and legislative developments will be governed by the principles of product sustainability.

Legislative Initiative For A Sustainable Products Policy 8

Legislative Initiative For A Sustainable Products Policy 8

This legislative proposal and any other complementary regulatory or optional approach will be developed in a way that improves coherence with existing means of regulating products at different stages of their life cycle. The Commission's purpose is that the future broader policy and legislative developments will be governed by the principles of product sustainability.

- The Commission will also improve the effectiveness of the current framework for the ecodesign of energy-related products, including
- the rapid adoption and implementation of a new working program on ecodesign and energy labeling for the period 2020-2024 for individual product groups.

Design of sustainable products 1

Design of sustainable products 1

The Commission will also improve the effectiveness of the current framework for the ecodesign of energy-related products, including the rapid adoption and implementation of a new working program on ecodesign and energy labeling for the period 2020-2024 for individual product groups.

- The review of the Ecodesign Directive as well as further work on specific product groups, in the context of eco-design or other instruments, will make use, as appropriate, of criteria and rules established under the EU Ecolabel Regulation, the environmental product footprint approach and the EU GPP Criteria.
- The Commission will consider introducing mandatory requirements for the sustainability of not only goods but also services.

Design of sustainable products 2

Design of sustainable products 2

The review of the Ecodesign Directive as well as further work on specific product groups, in the context of eco-design or other instruments, will make use, as appropriate, of criteria and rules established under the EU Ecolabel Regulation, the environmental product footprint approach and the EU GPP Criteria. The Commission will consider introducing mandatory requirements for the sustainability of not only goods but also services.

- In addition, the possibility of establishing requirements linked to the environmental and social aspects of the value chain will be carefully assessed,
- from the production and use until the end of the product's life, including under WTO

rules.

- For example, ensuring accessibility to certain products and services, in addition to contributing to social inclusion,
- may have additional benefits, as it increases the durability and reusability of the product.

Design of sustainable products 3

Design of sustainable products 3

In addition, the possibility of establishing requirements linked to the environmental and social aspects of the value chain will be carefully assessed, from the production and use until the end of the product's life, including under WTO rules. For example, ensuring accessibility to certain products and services, in addition to contributing to social inclusion may have additional benefits, as it increases the durability and reusability of the product.

- In addition, to support the effective and efficient implementation of the new Sustainable Product Policy Framework, the Commission will take the following steps:
- establish a common European data area for smart circular applications, with data on value chains and product information;
- step up efforts, in cooperation with national authorities, to enforce applicable sustainability requirements for products placed on the Union market, in particular through

coordinated audits and market monitoring actions.

Design of sustainable products 4

Design of sustainable products 4

In addition, to support the effective and efficient implementation of the new Sustainable Product Policy Framework, the Commission will take the following steps:

- establish a common European data area for smart circular applications, with data on value chains and product information;
 - step up efforts, in cooperation with national authorities, to enforce applicable sustainability requirements for products placed on the Union market, in particular through coordinated audits and market monitoring actions.
- Empowering consumers and providing them with cost-saving opportunities is a key structural element of the sustainable product policy framework.
 - To enhance consumer participation in the circular economy, the Commission will propose to revise EU consumer law so that consumers receive reliable and relevant information about products at the point of sale, including their lifespan and the provision of repair services, spare parts and repair manuals.
 - The Commission will also consider further strengthening consumer protection against pseudo-green identity and early depreciation, establishing minimum requirements for sustainability labels/logos and information tools.

Empowering consumers and public sector buyers 1

Empowering consumers and public sector buyers 1

Empowering consumers and providing them with cost-saving opportunities is a key structural element of the sustainable product policy framework. To enhance consumer participation in the circular economy, the Commission will propose to revise EU consumer law so that consumers receive reliable and relevant information about products at the point of sale, including their lifespan and the provision of repair services, spare parts and repair manuals.

The Commission will also consider further strengthening consumer protection against pseudo-green identity and early depreciation, establishing minimum requirements for sustainability labels/logos and information tools.

- In this case, the Commission will also work towards the introduction of the new "right to repair" and will consider new horizontal substantive rights for consumers,
- Regarding the provision of spare parts or access to repair services and, in the case of ICT and electronic products, upgrade services.
- Regarding the role of guarantees in the availability of more circular products, the Commission will examine which changes are possible.

Empowering consumers and public sector buyers 2

Empowering consumers and public sector buyers 2

In this case, the Commission will also work towards the introduction of the new "right to repair" and will consider new horizontal substantive rights for consumers, for example, regarding the provision of spare parts or access to repair services and, in the case of ICT and electronic products, upgrade services.

Regarding the role of guarantees in the availability of more circular products, the Commission will examine which changes are possible.

- The Commission will also suggest to companies to document their environmental claims.
- This will happen using the environmental footprint methods of products and organisms.
- The Commission will test the integration of these methods into the EU Ecolabel and more systematically include durability, recyclability and recycled material in the EU Ecolabel award criteria.

Empowering consumers and public sector buyers 3

Empowering consumers and public sector buyers 3

The Commission will also suggest to companies to document their environmental through the use of the environmental

footprint methods of products and organisms. The Commission will test the integration of these methods into the EU Ecolabel and more systematically include durability, recyclability and recycled material in the EU Ecolabel award criteria.

- The purchasing power of public authorities represents 14% of EU GDP, and can significantly stimulate demand for sustainable products.
- To exploit this potential, the Commission will propose minimum mandatory criteria for Green Public Procurement (GPP) and goals in sectoral legislation
- The Commission will also gradually implement the mandatory reporting in order to monitor the utilization of Green Public Procurement (GPP), without creating an unjustified administrative burden for buyers who are public bodies.

Empowering consumers and public sector buyers 4

Empowering consumers and public sector buyers 4

The purchasing power of public authorities represents 14% of EU GDP, and can significantly stimulate demand for sustainable products. To exploit this potential, the Commission will propose minimum mandatory criteria for Green Public Procurement (GPP) and goals in sectoral legislation, and will also gradually implement the mandatory reporting in order to monitor the utilization of Green Public Procurement (GPP), without creating an unjustified administrative burden for buyers who are public bodies.

- In addition, the Commission will continue to support capacity building, by guiding, training and disseminating best practices,
- Encouraging buyers who are public bodies to participate in the "Public Buyers for Climate and Environment" initiative,
- which will facilitate the exchange of information between buyers committed to implement the GPP.

Empowering consumers and public sector buyers 5

Empowering consumers and public sector buyers 5

In addition, the Commission will continue to support capacity building, by guiding, training and disseminating best practices and encouraging buyers who are public bodies to participate in the "Public Buyers for Climate and Environment" initiative, which will facilitate the exchange of information between buyers committed to implement the GPP.

Circularity in production methods 3

Circularity in production methods 1

- Circularity is an essential part of a broader transformation of the industry towards climate neutrality and long-term competitiveness.
- It can offer significant material savings in all value chains and production methods, generate added value and reveal economic opportunities.
- The Commission, in synergy with the objectives set out in the industrial strategy, will increase circularity in industry in the following ways:

1

2

Circularity in production methods 2

Circularity in production methods 2

by facilitating industrial coexistence through the development of an industry-led reporting and certification system and by taking measures to enable industrial coexistence to take place

evaluating options for further promoting the circularity of industrial production methods in the context of the review of the Industrial Emissions Directive,

- by supporting the sustainable and cyclical bio-products sector through the implementation of the bio-economy action plan
- promoting the use of digital technologies for tracking, locating and mapping resources
- promoting the utilization of ecological technologies through a reliable verification system, by registering the EU environmental technology verification system as a Union certification mark

Circularity in production methods 3

Circularity in production methods 3

by supporting the sustainable and cyclical bio-products sector through the implementation of the bio-economy action plan

- promoting the use of digital technologies for tracking, locating and mapping resources
- promoting the utilization of ecological technologies through a reliable verification system, by registering the EU environmental technology verification system as a Union certification mark

- The new strategy for SMEs will strengthen cyclical industrial cooperation between SMEs,
- This will be done on the one hand by training and providing advice within the "Enterprise

- Europe Network" regarding the cooperation of cooperative formations,
- And on the other hand with the transfer of knowledge through the European Resource Efficiency Knowledge Center.

Circularity in production methods 4

Circularity in production methods 4

The new strategy for SMEs will strengthen cyclical industrial cooperation between SMEs, by training and providing advice within the "Enterprise Europe Network" regarding the cooperation of cooperative formations, and with the transfer of knowledge through the European Resource Efficiency Knowledge Center.

- The challenge for sustainability imposed by key value chains requires immediate, integrated and coordinated action, which will be an integral part of the sustainable product policy framework.
- These actions will help tackle climate emergencies and enrich the EU's industrial strategy, as well as the forthcoming biodiversity strategy, the "farm - to - fork strategy" and the forest strategy.
- In the context of the management of sectoral actions, the Commission will work closely with stakeholders on key value chains to identify barriers to the expansion of circular product markets and how to address these barriers.

Value Chains of Basic Products

Value Chains of Basic Products

The challenge for sustainability imposed by key value chains requires immediate, integrated and coordinated action, which will be an integral part of the sustainable product policy framework. These actions will help tackle climate emergencies and enrich the EU's industrial strategy, as well as the forthcoming biodiversity strategy, the "farm - to - fork strategy" and the forest strategy. In the context of the management of sectoral actions, the Commission will work closely with stakeholders on key value chains to identify barriers to the expansion of circular product markets and how to address these barriers.

Electronic products and ICT 1

Electronic products and ICT 1

Electrical and electronic equipment is still one of the fastest growing waste flows in the EU, with current annual growth rates of 2%. It is estimated that less than 40% of electronic waste is collected and recycled in the EU. There is a loss of value when fully or partially functional products are discarded because they cannot be repaired, the battery cannot be replaced, the software is no longer supported, or when the materials embedded in these devices are not recovered. Nearly two-thirds of Europeans would like to continue using their digital devices for a longer period of time, provided their performance is not

significantly affected.

Electronic products and ICT 2

Electronic products and ICT 2

- To address these challenges, the Commission will present a "circular electronics initiative"
- The purpose of this is to mobilize existing and new instruments.
- Under the new Sustainable Product Policy Framework, this initiative will promote the extension of product life and will include, inter alia, the following actions:
 - regulatory measures for electronic products and ICT such as mobile phones, tablets and laptops, in accordance with the Ecodesign Directive, so that these devices are designed with energy efficiency and durability, repairability, upgradeability, maintenance, reuse and recycling.
 - The forthcoming ecodesign working program will provide further details on this issue. Printers and consumables such as printer inks will also be covered, unless the sector reaches an ambitious optional agreement within the next six months
 - focus on electronic products and ICT as a priority area for the implementation of the "right to repair", including the right to update outdated software.

Electronic products and ICT 3

Electronic products and ICT 3

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- focus on electronic products and ICT as a priority area for the implementation of the "right to repair", including the right to update outdated software.
- regulatory measures for chargers for mobile phones and similar devices, including the introduction of a common charger and the improvement of the durability of charging cables,
- improving the collection and treatment of electrical and electronic equipment waste
- review of EU Restrictions of Hazardous Substances in electrical and electronic equipment

Electronic products and ICT 4

Electronic products and ICT 4

regulatory measures for chargers for mobile phones and similar devices, including the introduction of a common charger and the improvement of the durability of charging cables,

- improving the collection and treatment of electrical and electronic equipment waste, including by exploring options for a wide return or resale system for old mobile phones, tablets and chargers on EU level
- review of EU Restrictions of Hazardous Substances in electrical and electronic equipment and providing guidelines for improving coherence with relevant legislation

- The transportation of the future is based on sustainable batteries and sustainable vehicles.
- In order to make rapid progress in improving the sustainability of the emerging value chain of batteries for electromobility and to strengthen the cyclical capacity of all batteries, the Commission will propose a new regulatory framework for batteries this year.

Electric batteries and vehicles 1

Electric batteries and vehicles 1

The transportation of the future is based on sustainable batteries and sustainable vehicles.
In order to make rapid progress in improving the sustainability of the emerging value chain of batteries for electromobility

and to strengthen the cyclical capacity of all batteries, the Commission will propose a new regulatory framework for batteries this year.

This legislative proposal will make use of the evaluation of the Batteries Directive, taking into account the following elements:

- recycled content rules and measures to improve collection and recycling rates for all batteries
- ensuring the recovery of valuable materials and providing guidance to consumers
- examination of the issue of non-rechargeable batteries
- sustainability and transparency requirements for batteries taking into account, for example, the carbon footprint of the battery construction

Electric batteries and vehicles 2

Electric batteries and vehicles 2

This legislative proposal will make use of the evaluation of the Batteries Directive, taking into account the following elements:

- recycled content rules and measures to improve collection and recycling rates for all batteries, ensuring the recovery of valuable materials and providing guidance to consumers
- examination of the issue of non-rechargeable batteries, with the aim of eliminating their use in cases where there are alternatives

- sustainability and transparency requirements for batteries taking into account, for example, the carbon footprint of the battery construction, the ethical provision of raw materials and security of supply, as well as the facilitation of re-use, adjustment and recycling.

[Learn more](#)

Electric batteries and vehicles 3

Electric batteries and vehicles 3

- The Commission will also propose a revision of the end-of-life vehicles regulations
 - the purpose of this is to promote more circular business models, by linking aspects of design with processing at the end of their life cycle,
 - In addition, the Commission will consider the most effective measures to ensure the collection and environmentally sound treatment of waste oils.
- From a broader perspective, the forthcoming integrated European strategy for sustainable and smart transportation will look at strengthening synergies with the transition to a circular economy,

- by implementing solutions such as "product as service", in order to reduce the consumption of virgin materials, the use of alternative fuels for transport,
- by optimizing the use of infrastructure and vehicles, increasing occupancy rates and load rates and eliminating waste and pollution.

Electric batteries and vehicles 4

Electric batteries and vehicles 4

From a broader perspective, the forthcoming integrated European strategy for sustainable and smart transportation will look at strengthening synergies with the transition to a circular economy, especially by implementing solutions such as "product as service", in order to reduce the consumption of virgin materials, to use alternative fuels for transport, optimize the use of infrastructure and vehicles, increase occupancy rates and load rates and eliminate waste and pollution.

- The amount of materials used for packaging is constantly increasing.
- In 2017, packaging waste in Europe reached an unprecedented level — 173 kg per capita, higher than ever.
- To ensure that all packaging on the EU market is reusable or recyclable in an

economically sustainable way by 2030, the Commission will strengthen the mandatory essential packaging requirements that will be allowed on the EU market, and will consider other measures.

Packaging 1

Packaging 1

The amount of materials used for packaging is constantly increasing. In 2017, packaging waste in Europe reached an unprecedented level — 173 kg per capita, higher than ever.

To ensure that all packaging on the EU market is reusable or recyclable in an economically sustainable way by 2030, the Commission will strengthen the mandatory essential packaging requirements that will be allowed on the EU market, and will consider other measures.

focusing on the following:

- reduction of (excessive) packaging and packaging waste, including through the setting of goals and other measures to prevent the generation of waste
- promoting design in order for the packaging to be reused and recyclable, taking into account, inter alia, restrictions on the use of certain packaging materials for specific applications,
- considering the possibility of reducing the complexity of packaging materials, including the number

of materials and polymers used.

Packaging 2

Packaging 2

focusing on the following:

- reduction of (excessive) packaging and packaging waste, including through the setting of goals and other measures to prevent the generation of waste
- promoting design in order for the packaging to be reused and recyclable, taking into account, inter alia, restrictions on the use of certain packaging materials for specific applications, especially when alternative reusable products or systems can be used or when consumer goods can be transported safely without packaging
- considering the possibility of reducing the complexity of packaging materials, including the number of materials and polymers used.

- As part of the initiative for the harmonization of separate collection systems, the Commission will examine whether labeling is possible at EU level to facilitate the separate sorting of packaging waste at source.
- The Commission will also establish rules for the safe recycling of plastics, other than PET, so that they can be turned into materials that will be in contact with food.
- It will also strictly monitor and support the implementation of the requirements of the Drinking Water

Directive in order to make tap water accessible in public places, which will reduce dependence on bottled water and prevent the generation of packaging waste.

Packaging 3

Packaging 3

As part of the initiative for the harmonization of separate collection systems, the Commission will examine whether labeling is possible at EU level to facilitate the separate sorting of packaging waste at source. The Commission will also establish rules for the safe recycling of plastics, other than PET, so that they can be turned into materials that will be in contact with food. It will also strictly monitor and support the implementation of the requirements of the Drinking Water Directive in order to make tap water accessible in public places, which will reduce dependence on bottled water and prevent the generation of packaging waste.

2

The EU strategy for plastics in the circular economy has led to a comprehensive set of initiatives addressing a problem of serious public concern.

3

However, as plastic consumption is expected to double over the next 20 years,

the Commission will take further steps to address the sustainability challenges posed by this widespread material.

1

START

Plastics 1

Plastics 1

"Biodiversity means the diversity of living organisms of all origins, including, inter alia, terrestrial, marine and other aquatic ecosystems and ecological complexes of which they are a part. It also includes diversity within species, between species and ecosystems." In a few words, biodiversity is defined as the diversity of life in all its forms (plants, animals, fungi, etc.) and at all levels of its organization (genes, organisms, ecosystems).

The concept of biodiversity therefore embraces all life on Earth. It includes the way of expressing or appreciating the diversity that exists at the various levels of life organization. It reflects the number, variety and variability of living organisms

and the systems that they compose.

Plastics 2

Plastics 2

In order to increase the utilization of recycled content and contribute to a more sustainable use of plastics, the Commission will introduce mandatory recycling requirements and waste reduction measures for commodities such as packaging, building materials and vehicles, also taking into account the activities of the plastics recycling alliance.

In addition to measures to reduce plastic waste, the Commission will examine the presence of microplastics in the environment, taking the following steps:

- restriction of microplastics that have been intentionally added
- control of agglomerates, taking into account the opinion of the European Chemicals Agency
- development of labeling, standardization, certification and regulatory measures for the unintentional release of microplastics

Plastics 3

Plastics 3

In addition to measures to reduce plastic waste, the Commission will examine the presence of microplastics in the environment, taking the following steps:

restriction of microplastics that have been intentionally added and control of agglomerates, taking into account the opinion of the European Chemicals Agency

- development of labeling, standardization, certification and regulatory measures for the unintentional release of microplastics, including measures to increase the commitment of microplastics at all relevant stages of the product life cycle

- further development and harmonization of measurement methods for unintentionally released microplastics,
- in particular from tires and fabrics, and provision of harmonized data on the concentrations of microplastics in seawater.
- eliminating gaps in scientific knowledge about the risk and the presence of microplastics in the environment, drinking water and food

Plastics 4

Plastics 4

further development and harmonization of measurement methods for unintentionally released microplastics, in particular from tires and fabrics, and provision of harmonized data on the concentrations of microplastics in seawater.

- eliminating gaps in scientific knowledge about the risk and the presence of microplastics in the environment, drinking water and food

In addition, the Commission will address the emerging challenges to sustainability by developing a policy framework on the following issues:

- the supply, labeling and use of plastics of biological origin,
- the use of biodegradable or compostable plastics, based on an evaluation of the applications in which such use may be beneficial to the environment, and the criteria governing such applications.
- The purpose is to ensure that a product labeled "biodegradable" or "compostable" does not lead consumers to disposal options that cause plastic waste or pollution due to unsuitable environmental conditions or insufficient degradation time.

Plastics 5

Plastics 5

In addition, the Commission will address the emerging challenges to sustainability by developing a policy framework on the following issues:

- the supply, labeling and use of plastics of biological origin, based on an assessment of the extent to which the use of raw materials of biological origin has real environmental benefits, in addition to the reduction in the use of mineral resources

- the use of biodegradable or compostable plastics, based on an evaluation of the applications in which such use may be beneficial to the environment, and the criteria governing such applications. The purpose is to ensure that a product labeled "biodegradable" or "compostable" does not lead consumers to disposal options that cause plastic waste or pollution due to unsuitable environmental conditions or insufficient degradation time.

- The Commission will ensure the timely implementation of the new directive on disposable plastic products and fishing gear
- in order to tackle the problem of marine pollution from plastic waste, while safeguarding the single market, in particular with regard to the following:
 - harmonized interpretation of the products covered by the Directive
 - labeling of products such as tobacco, cups and wet wipes, and ensuring the use of bottles with non-removable caps to prevent the generation of waste
 - development, for the first time, of rules for measuring recycled content in products

Plastics 6

Plastics 6

The Commission will ensure the timely implementation of the new directive on disposable plastic products and fishing gear in order to tackle the problem of marine pollution from plastic waste, while safeguarding the single market, in particular with regard to the following:

- harmonized interpretation of the products covered by the Directive
- labeling of products such as tobacco, cups and wet wipes, and ensuring the use of bottles with non-removable caps to prevent the generation of waste
- development, for the first time, of rules for measuring recycled content in products

Textile products 1

Textile products 1

Textile products are the fourth highest pressure category in terms of raw material and water use, after food, housing and transportation, and the fifth in terms of greenhouse gas emissions.

It is estimated that less than 1% of all textiles worldwide are recycled into new textiles.

The EU textile sector, which consists mainly of SMEs, has begun to recover after a long period of restructuring, with 60% of the value of garments sold in the EU being produced in third countries.

- Given the complexity of the textile value chain, the Commission,
- responding to these challenges, will propose an integrated EU strategy for textiles, based on input from the industry and other stakeholders.
- The strategy will aim to boost industrial competitiveness and innovation in the sector, boost the EU market for sustainable and cyclical textiles, including the textile reuse market, tackle fast fashion and

promote new business models.

Textile products 2

Textile products 2

Given the complexity of the textile value chain, the Commission, responding to these challenges, will propose an integrated EU strategy for textiles, based on input from the industry and other stakeholders. The goal of the strategy will be to boost industrial competitiveness and innovation in the sector, boost the EU market for sustainable and cyclical textiles, including the textile reuse market, tackle fast fashion and promote new business models.

This will be achieved through a comprehensive set of measures which include:

- the implementation of the new sustainable product policy framework in textile products,
- including the development of ecodesign measures to ensure that textiles are suitable for circularity
- by ensuring the utilization of secondary raw materials, combating the presence of hazardous chemicals and encouraging businesses and private consumers to choose sustainable textiles and have easy access to reuse and repair services

Textile products 3

Textile products 3

This will be achieved through a comprehensive set of measures which include:

- the implementation of the new sustainable product policy framework in textile products, including the development of ecodesign measures to ensure that textiles are suitable for circularity, by ensuring the utilization of secondary raw materials, combating the presence of hazardous chemicals and encouraging businesses and private consumers to choose sustainable textiles and have easy access to reuse and repair services
- improving the business and regulatory environment for sustainable and cyclical textile products in the EU, in particular by providing incentives and support for “product-to-service” models, circular materials and production methods, and enhancing transparency through international cooperation
- providing guidance on achieving high levels of separate collection of textile waste, which Member States must ensure by 2025
- strengthening the sorting, reuse and recycling of textile products, including through innovation, encouraging industrial applications and regulatory measures, such as extending producer responsibility

Textile products 4

Textile products 4

improving the business and regulatory environment for sustainable and cyclical textile products in the EU, in particular by providing incentives and support for “product-to-service” models, circular materials and production methods, and enhancing transparency through international cooperation

- providing guidance on achieving high levels of separate collection of textile waste, which Member States must ensure by 2025
- strengthening the sorting, reuse and recycling of textile products, including through innovation, encouraging industrial applications and regulatory measures, such as extending producer responsibility

Constructions and buildings 1

Constructions and buildings 1

- The structured environment significantly affects many sectors of the economy, local jobs and quality of life.
- It requires huge amounts of resources and represents about 50% of all mined materials.
- The construction sector accounts for more than 35% of total waste generation in the EU.
- Greenhouse gas emissions from the extraction of materials, the production of construction products, the construction and renovation of buildings are estimated to represent 5-12% of total national

greenhouse gas emissions.

- Increasing the efficient use of materials can save up to 80% of these emissions.
- The Commission will launch a new integrated strategy for a sustainable structured environment
- in order to take advantage of the opportunity to increase the efficiency of materials and reduce climatic effects.
- This strategy will ensure coherence in relevant policy areas, such as climate, energy and resource efficiency, construction and demolition waste management, accessibility, digitization and skills.

Constructions and buildings 2

Constructions and buildings 2

The Commission will launch a new integrated strategy for a sustainable structured environment in order to take advantage of the opportunity to increase the efficiency of materials and reduce climatic effects.
This strategy will ensure coherence in relevant policy areas, such as climate, energy and resource efficiency, construction and demolition waste management, accessibility, digitization and skills.

It will promote the principles of circularity throughout the life cycle of buildings, through the following measures:

- examining the sustainability performance of construction products in the context of the revision of the Construction Products Regulation,
- including the possible introduction of recycled content requirements for certain construction products, taking into account their safety and functionality
- promoting measures to improve the resilience and adaptability of structured assets, in line with the principles of the circular economy for building design and the development of digital registers for buildings.

Constructions and buildings 3

Constructions and buildings 3

It will promote the principles of circularity throughout the life cycle of buildings, through the following measures:

- examining the sustainability performance of construction products in the context of the revision of the Construction Products Regulation, including the possible introduction of recycled content requirements for certain construction products, taking into account their safety and functionality
- promoting measures to improve the resilience and adaptability of structured assets, in line with the principles of the circular economy for building design and the development of digital registers for buildings
- using the "Level(s)" framework to integrate life cycle assessment into public procurement and the EU

Sustainable Finance Framework,

- exploring the feasibility of setting goals for reducing carbon emissions and their storage capacity
- possible revision of the material recovery goals set out in EU legislation on construction and demolition waste and the fractions of each material in them
- promoting initiatives to reduce soil sealing, rehabilitate abandoned or contaminated industrial areas and increase the safe, sustainable and circular use of excavation soil.

Constructions and buildings 4

Constructions and buildings 4

using the "Level(s)" framework to integrate life cycle assessment into public procurement and the EU Sustainable Finance Framework, and exploring the feasibility of setting goals for reducing carbon emissions and their storage capacity

- possible revision of the material recovery goals set out in EU legislation on construction and demolition waste and the fractions of each material in them
- promoting initiatives to reduce soil sealing, rehabilitate abandoned or contaminated industrial areas and increase the safe, sustainable and circular use of excavation soil.

- In addition, the "renovation wave" initiative which, as announced under the European Green Deal, will lead to significant improvements in energy efficiency in the EU,
- will be implemented in accordance with the principles of the circular economy, in particular by optimizing life cycle performance and increasing the life expectancy of

structured assets.

- As part of the review of material recovery and demolition waste goals, the Commission will pay particular attention to insulating materials, which produce an increasing waste stream.

Constructions and buildings 5

Constructions and buildings 5

In addition, the "renovation wave" initiative which, as announced under the European Green Deal, will lead to significant improvements in energy efficiency in the EU, will be implemented in accordance with the principles of the circular economy, in particular by optimizing life cycle performance and increasing the life expectancy of structured assets. As part of the review of material recovery and demolition waste goals, the Commission will pay particular attention to insulating materials, which produce an increasing waste stream.

- The circular economy can significantly reduce the negative impact that mining and resource use have on the environment.
- It can contribute to the restoration of biodiversity and natural capital in Europe.
- Biological resources are a key input to the EU economy and will play an even more important role in the future.
- The aim of the Commission will be to ensure the sustainability of renewable materials of biological origin, including through actions following the bioeconomy strategy and

action plan.

Food, water and nutrients 1

Food, water and nutrients 1

The circular economy can significantly reduce the negative impact that mining and resource use have on the environment and contribute to the restoration of biodiversity and natural capital in Europe. Biological resources are a key input to the EU economy and will play an even more important role in the future. The aim of the Commission will be to ensure the sustainability of renewable materials of biological origin, including through actions following the bioeconomy strategy and action plan.

- Despite the fact that the food value chain is responsible for significant pressures on the resources and environment,
- it is estimated that 20 % of the total amount of food produced is lost or wasted in the EU.
- Therefore, according to the goals for sustainable development and in the context of the revision of the 2008/98/EC Directive, the Commission will propose a goal in order to reduce food waste,
- as the key action in the context of the EU “farm - to - fork strategy”, which will address

the food value chain.

Food, water and nutrients 2

Food, water and nutrients 2

Despite the fact that the food value chain is responsible for significant pressures on the resources and environment, it is estimated that 20 % of the total amount of food produced is lost or wasted in the EU. Therefore, according to the goals for sustainable development and in the context of the revision of the 2008/98/EC Directive, mentioned in Unit 4.1, the Commission will propose a goal in order to reduce food waste, as the key action in the context of the EU “farm - to - fork strategy”, which will address the food value chain.

- The Commission will also consider specific measures to increase sustainability in food distribution and consumption.
- The Commission, as part of the Sustainable Products Initiative, will launch detailed work to define the scope of a legislative initiative on reuse,
- in order to replace packaging, tableware and disposable cutlery with reusable products in food services.

Food, water and nutrients 3

Food, water and nutrients 3

The Commission will also consider specific measures to increase sustainability in food distribution and consumption. The Commission, as part of the Sustainable Products Initiative, will launch detailed work to define the scope of a legislative initiative on reuse, in order to replace packaging, tableware and disposable cutlery with reusable products in food services.

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The new regulation on water reuse will encourage the implementation of circular approaches to water reuse in agriculture.

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The Commission will facilitate the reuse and efficient use of water, including in industrial production methods.

In addition, it will develop a comprehensive nutrients management plan to ensure more sustainable nutrients use and to encourage markets for recovered nutrients.

The Commission will also consider reviewing the directives on wastewater treatment and sewage sludge and will evaluate natural ways for the removal of nutrients such as algae.

START

Food, water and nutrients 4

Food, water and nutrients 4

"Biodiversity means the diversity of living organisms of all origins, including, inter alia, terrestrial, marine and other aquatic ecosystems and ecological complexes of which they are a part. It also includes diversity within species, between species and ecosystems." In a few words, biodiversity is defined as the diversity of life in all its forms (plants, animals, fungi, etc.) and at all levels of its organization (genes, organisms, ecosystems).

The concept of biodiversity therefore embraces all life on Earth. It includes the way of expressing or appreciating the diversity that exists at the various levels of life organization. It reflects the number, variety and variability of living organisms and the systems that they compose.

- Despite efforts at EU and national level, the amount of waste generated is not declining.

- The annual production of waste from all economic activities in the EU amounts to 2.5 billion tons, or 5 tons per capita per year, while each citizen produces almost half a ton of municipal waste.
- Disconnecting waste generation from economic development will require significant effort throughout the value chain and in each household.

Improving water policy to support waste prevention and circularity 1

Improving water policy to support waste prevention and circularity 1

Despite efforts at EU and national level, the amount of waste generated is not declining.

The annual production of waste from all economic activities in the EU amounts to 2.5 billion tons, or 5 tons per capita per year, while each citizen produces almost half a ton of municipal waste. Disconnecting waste generation from economic development will require significant effort throughout the value chain and in each household.

- Developing a policy on sustainable products and translating it into specific legislation will be crucial for making progress on waste prevention.
- In addition, we need to make the most of, strengthen and better enforce the EU waste legislation.
- EU waste legislation has led to significant improvements in waste management since the

1970s.

- But it must be constantly updated to adapt to the circular economy and the digital era.

Improving water policy to support waste prevention and circularity 2

Improving water policy to support waste prevention and circularity 2

Developing a policy on sustainable products and translating it into specific legislation will be crucial for making progress on waste prevention. In addition, we need to make the most of, strengthen and better enforce the EU waste legislation. EU waste legislation has led to significant improvements in waste management since the 1970s. But it must be constantly updated to adapt to the circular economy and the digital era. The review of EU legislation on batteries, packaging, end-of-life vehicles and hazardous substances in electronic equipment will be proposed in order to prevent waste, increase recycling, promote safer and cleaner waste flows and ensure high quality recycling.

1

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Improving water policy to support waste prevention and circularity 3

Improving water policy to support waste prevention and circularity 3

All this will serve the purpose of significantly reducing waste production and will reduce in half the amount of residual (non-recycled) municipal waste by 2030.

The Commission will also improve the implementation of the recently adopted requirements for extended producer responsibility schemes, provide incentives and encourage the exchange of information and good practices in the field of waste recycling.

In addition, the Commission will propose waste reduction goals for specific flows, as part of a wider range of measures to prevent waste generation.

- High quality recycling is based on efficient separate waste collection.
- To assist citizens, businesses and public authorities in better waste sorting, the Commission will propose the harmonization of separate waste collection systems.
- In particular, this proposal will cover the most effective combinations of separate collection models, the density and accessibility of separate collection points, including public spaces, taking into account regional and local conditions.

Improving water policy to support waste prevention and circularity 4

Improving water policy to support waste prevention and circularity 4

High quality recycling is based on efficient separate waste collection. To assist citizens, businesses and public authorities in better waste segregation, the Commission will propose the harmonization of separate waste collection systems. In particular, this proposal will cover the most effective combinations of separate collection models, the density and accessibility of separate collection points, including public spaces, taking into account regional and local conditions.

- It will also seek to standardize and use quality management systems to ensure the quality of waste collected and intended for use in products, in particular as material that is in contact to food.
- Further efforts are needed to support waste management in the Member States.
- Half of them are at risk of non-compliance with the 2020 goals for recycling 50% of municipal waste.
- To promote policy reforms, the Commission will organize high-level contacts on the circular economy and waste and strengthen cooperation with Member States, regions and cities to make better use of EU funds.

Improving water policy to support waste prevention and circularity 5

Improving water policy to support waste prevention and circularity 5

- EU chemicals policy and legislation encourage the transition to safe chemicals, by design.
- This is done through the progressive substitution of hazardous substances for the better protection of citizens and the environment.
- However, there is still a risk of undermining the safety of secondary raw materials, for

example, in cases where prohibited substances are still retained in recycled raw materials.

Improving circularity in an environment free of toxic substances 1

Improving circularity in an environment free of toxic substances 1

EU chemicals policy and legislation encourage the transition to safe chemicals, by design, through the progressive substitution of hazardous substances for the better protection of citizens and the environment. However, there is still a risk of undermining the safety of secondary raw materials, for example, in cases where prohibited substances are still retained in recycled raw materials.

- In order to increase confidence in the use of secondary raw materials, the Commission will take the following steps:
- supporting the development of high quality sorting and waste removal solutions, including those from occasional pollution
- developing methodologies to minimize the presence of substances harmful to health or the environment in recycled materials and articles made from recycled materials

Improving circularity in an environment free of toxic substances 2

Improving circularity in an environment free of toxic substances 2

To increase confidence in the use of secondary raw materials, the Commission will take the following steps:

- supporting the development of high quality sorting and waste removal solutions, including those from occasional pollution
- developing methodologies to minimize the presence of substances harmful to health or the environment in recycled materials and articles made from recycled materials

- It will work with the industry to gradually develop harmonized systems for detecting and managing information on substances of very high concern
- There are also relevant substances, especially those with chronic effects and substances that cause technical problems in recovery operations along supply chains,
- It will propose amending the Annexes to the Regulation on Persistent Organic Pollutants, in line with scientific and technological developments and international commitments under the Stockholm Convention.

Improving circularity in an environment free of toxic substances 3

Improving circularity in an environment free of toxic substances 3

It will work with the industry to gradually develop harmonized systems for detecting and managing information on substances of very high concern and other relevant substances, especially those with chronic effects and substances that cause technical problems in recovery operations along supply chains, and the identification of these substances in waste, in combination with measures under the Sustainable Product Policy and the ECHA database of items containing substances of very high concern

It will propose amending the Annexes to the Regulation on Persistent Organic Pollutants, in line with scientific and technological developments and international commitments under the Stockholm Convention.

- It will improve the classification and management of hazardous substances in order to keep recycling flows clean, including through further alignment with the classification of chemicals and mixtures where required.
- The forthcoming chemical sustainability strategy will further examine the link between legislations.
- In particular, it will look at chemicals, products and waste and enhance synergies with

the circular economy.

Improving circularity in an environment free of toxic substances 4

Improving circularity in an environment free of toxic substances 4

It will improve the classification and management of hazardous substances in order to keep recycling flows clean, including through further alignment with the classification of chemicals and mixtures where required.

The forthcoming chemical sustainability strategy will further examine the link between legislations on chemicals, products and waste and enhance synergies with the circular economy.

- Secondary raw materials face some challenges in relation to primary raw materials, for reasons related not only to their safety but also to their performance, availability and cost.
- Some of the actions provided in this action plan, in particular those which introduce requirements for the recycled content of products,
- will help prevent supply and demand mismatches for secondary raw materials and ensure the expansion of the recycling industry in the EU

Creating a well-functioning EU market for secondary raw materials 1

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Secondary raw materials face some challenges in relation to primary raw materials, for reasons related not only to their safety but also to their performance, availability and cost.

Some of the actions provided in this action plan, in particular those which introduce requirements for the recycled content of products, will help prevent supply and demand mismatches for secondary raw materials and ensure the expansion of the recycling industry in the EU.

- In addition, in order to create a well-functioning internal market for secondary raw materials, the Commission will take the following steps:
- assessment of the prospect of developing, at EU level, criteria for the declassification of waste for specific waste flows,
- based on the monitoring by Member States of the implementation of the revised rules on waste and by-products declassification, and support for cross-border cooperation initiatives to harmonize national criteria for the declassification of waste and by-products.

Creating a well-functioning EU market for secondary raw materials 2

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In addition, in order to create a well-functioning internal market for secondary raw materials, the Commission will take the following steps:

- assessment of the prospect of developing, at EU level, criteria for the declassification of waste for specific waste flows, based on the monitoring by Member States of the implementation of the revised rules on waste and by-products declassification, and support for cross-border cooperation initiatives to harmonize national criteria for the declassification of waste and by-products.

Creating a well-functioning EU market for secondary raw materials 3

Creating a well-functioning EU market for secondary raw materials 3

Strengthening the role of standardization based on the ongoing evaluation of existing standardization work at national, European and international level.

Timely use of restrictions on the use of substances of very high concern, in the case of items in which the use of the

substance is subject to a licensing requirement, while continuously improving border enforcement. Evaluation of the feasibility of setting up a market observatory for key by-products.

- The global waste market is undergoing significant changes.
- Over the last decade, millions of tons of European waste have been exported to third countries, often without sufficient consideration for proper waste treatment.
- In many cases, waste exports have a negative impact on the environment and health in the destination countries, on the one hand, and a loss of resources and financial opportunities for the recycling industry in the EU on the other.
- Recent restrictions on imports by some third countries have highlighted the EU's over-reliance on waste treatment abroad, but have also mobilized the recycling industry to increase its capacity and add value to EU waste.

Dealing with waste exports by the EU 1

Dealing with waste exports by the EU 1

The global waste market is undergoing significant changes. Over the last decade, millions of tons of European waste have been exported to third countries, often without sufficient consideration for proper waste treatment. In many cases, waste exports have a negative impact on the environment and health in the destination countries, on the one hand, and a loss of resources and financial opportunities for the recycling industry in the EU on the other. Recent restrictions on imports by

some third countries have highlighted the EU's over-reliance on waste treatment abroad, but have also mobilized the recycling industry to increase its capacity and add value to EU waste.

- In the light of these developments, and given that the illegal transfer of waste remains a source of concern,
- the Commission will act to ensure that the EU does not export problematic waste to third countries.
- Actions concerning product design, quality and safety of secondary materials and the strengthening of related markets will help to make the "recycled in the EU" brand a benchmark for quality secondary material.

Dealing with waste exports by the EU 2

Dealing with waste exports by the EU 2

In the light of these developments, and given that the illegal transfer of waste remains a source of concern, the Commission will act to ensure that the EU does not export problematic waste to third countries.

Actions concerning product design, quality and safety of secondary materials and the strengthening of related markets will help to make the "recycled in the EU" brand a benchmark for quality secondary material.

- A thorough review of EU waste shipments rules will facilitate the preparation for waste reuse and recycling in the EU.

- The review will also aim to reduce waste exports that are harmful to the environment and health in third countries or can be treated domestically within the EU, focusing on destination countries, problematic waste flows, types of waste-related activities of concern, as well as law enforcement to combat illegal transport.
- The Commission will also support multilateral, regional and bilateral measures to combat environmental crime, in particular in areas of illegal exports and trafficking, to strengthen controls on waste shipments and to improve the sustainable management of waste in these countries.

Dealing with waste exports by the EU 3

Dealing with waste exports by the EU 3

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The Commission will also support multilateral, regional and bilateral measures to combat environmental crime, in particular in areas of illegal exports and trafficking, to strengthen controls on waste shipments and to improve the sustainable management of waste in these countries.

- Between 2012 and 2018, the number of jobs associated with the circular economy in the EU increased by 5%, reaching around 4 million.

- Circularity is expected to have a positive net effect on job creation, provided that employees have the skills required by the green transition.
- The potential of the social economy, which is at the forefront of job creation, will be further utilized, with mutual benefits from supporting the green transition and strengthening social inclusion, in particular in the framework of the action plan for the implementation of the European Pillar of Social Rights.

Making Circularity Functional For Citizens, Regions And Cities 1

Making Circularity Functional For Citizens, Regions And Cities 1

Between 2012 and 2018, the number of jobs associated with the circular economy in the EU increased by 5%, reaching around 4 million.

Circularity is expected to have a positive net effect on job creation, provided that employees have the skills required by the green transition. The potential of the social economy, which is at the forefront of job creation, will be further utilized, with mutual benefits from supporting the green transition and strengthening social inclusion, in particular in the framework of the action plan for the implementation of the European Pillar of Social Rights.

- The Commission will ensure that the tools available to support skills and job creation also

- help to accelerate the transition to a circular economy,
- including, inter alia, the updating of the relevant skills agenda, the launch of the Pact for skills with large-scale multilateral partnerships and the Action Plan for Social Economy.
 - The European Social Fund + will promote further investment in education and training systems, lifelong learning and social innovation.

Making Circularity Functional For Citizens, Regions And Cities 2

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The Commission will ensure that the tools available to support skills and job creation also help to accelerate the transition to a circular economy, including, inter alia, the updating of the relevant skills agenda, the launch of the Pact for skills with large-scale multilateral partnerships and the Action Plan for Social Economy. The European Social Fund + will promote further investment in education and training systems, lifelong learning and social innovation.

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Making Circularity Functional For Citizens, Regions And Cities 3

Making Circularity Functional For Citizens, Regions And Cities 3

"Biodiversity means the diversity of living organisms of all origins, including, inter alia, terrestrial, marine and other aquatic ecosystems and ecological complexes of which they are a part. It also includes diversity within species, between species and ecosystems." In a few words, biodiversity is defined as the diversity of life in all its forms (plants, animals, fungi, etc.) and at all levels of its organization (genes, organisms, ecosystems).

The concept of biodiversity therefore embraces all life on Earth. It includes the way of expressing or appreciating the diversity that exists at the various levels of life organization. It reflects the number, variety and variability of living organisms and the systems that they compose.

The Just Transition Mechanism proposed under the European Green Deal Investment Plan and the InvestEU Programme will be able to support projects focusing on circular economy.

In the context of circular economy, solutions will be found specifically adapted to extremely remote regions and islands, due to their dependence on resource imports, high waste production due to tourism and waste exports.

Cohesion policy funds, in addition to raising awareness, cooperation and capacity building, will help regions implement circular economy strategies and strengthen their industrial network and value chains.

To support the necessary investment at regional level, the Commission will build on the potential of EU financial instruments and funds and ensure that all regions benefit from the transition.

- The proposed European Urban Initiative, the Smart Cities Challenge Initiative and the Circular Cities and Regions Initiative will provide significant assistance to cities.
- The circular economy will be one of the priority areas of the Green City Accord.
- • The European Circular Economy Stakeholder Platform will continue to be a forum for the exchange of information between stakeholders.

Making Circularity Functional For Citizens, Regions And Cities 4

Making Circularity Functional For Citizens, Regions And Cities 4

The proposed European Urban Initiative, the Smart Cities Challenge Initiative and the Circular Cities and Regions Initiative will provide significant assistance to cities.

The circular economy will be one of the priority areas of the Green City Accord.

The European Circular Economy Stakeholder Platform will continue to be a forum for the exchange of information between stakeholders.

- In order to achieve climate neutrality, the synergies between cyclicity and the reduction of greenhouse gas emissions must be enhanced. The Commission:
- will analyze how the impact of circularity on climate change mitigation and adaptation can be systematically measured
- will improve modeling tools to reap the benefits of the circular economy in reducing greenhouse gas emissions at EU and national level
- will promote the role of cyclicity in future revisions of national energy and climate plans and in other climate policies, as appropriate

Horizontal Actions

Circularity as a precondition for climate neutrality 1

Horizontal Actions

- In order to achieve climate neutrality, the synergies between cyclicity and the reduction of greenhouse gas emissions must be enhanced. The Commission:
- will analyze how the impact of circularity on climate change mitigation and adaptation can be systematically measured
 - will improve modeling tools to reap the benefits of the circular economy in reducing greenhouse gas emissions at EU and national level

- will promote the role of cyclicity in future revisions of national energy and climate plans and in other climate policies, as appropriate

- Achieving climate neutrality will require not only reducing greenhouse gas emissions but also removing carbon from the atmosphere, using it in our economy without releasing it, and storing it for longer periods of time.
- Carbon sequestrations can be based on nature, including through ecosystem restoration, forest protection, reforestation and carbon sequestration agriculture,
- or on increasing circularity, for example through long-term storage of carbon in wood structures, reuse and storage of carbon in products, such as carbonation in building materials.

Horizontal Actions

Circularity as a precondition for climate neutrality 2

Horizontal Actions

Achieving climate neutrality will require not only reducing greenhouse gas emissions but also removing carbon from the atmosphere, using it in our economy without releasing it, and storing it for longer periods of time.

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Horizontal Actions

Circularity as a precondition for climate neutrality 3

Horizontal Actions

- To provide incentives to exploit carbon removal and increase its circularity, with full respect for biodiversity objectives,
 - the Commission will consider developing a regulatory framework for the certification of carbon sequestrations,
 - based on robust and transparent carbon monitoring and verification of the authenticity of carbon sequestrations.
-
- Accelerating the green transition requires the introduction of careful but decisive measures to orient funding towards more sustainable production and consumption patterns.
 - The Commission has already taken a number of initiatives on this issue, including the

integration of the circular economy objective.

- This will happen under the EU Classification Regulation, as well as preparatory work on EU ecolabel criteria for financial products.

Proper financial management 1

Proper financial management 1

Accelerating the green transition requires the introduction of careful but decisive measures to orient funding towards more sustainable production and consumption patterns. The Commission has already taken a number of initiatives on this issue, including the integration of the circular economy objective.

This will happen under the EU Classification Regulation, as well as preparatory work on EU ecolabel criteria for financial products.

•

- The platform for financial support of the circular economy will continue to provide guidance to project promoters with circular incentives, capacity building and financial risk management.
- EU financial instruments, such as the SME guarantees under the current framework and

the InvestEU program since 2021, mobilize private funding to support the circular economy.

- The Commission has also proposed a new own resource for the EU budget, which is based on the amount of non-recycled plastic packaging waste.

Proper financial management 2

Proper financial management 2

The platform for financial support of the circular economy will continue to provide guidance to project promoters with circular incentives, capacity building and financial risk management. EU financial instruments, such as the SME guarantees under the current framework and the InvestEU program since 2021, mobilize private funding to support the circular economy. The Commission has also proposed a new own resource for the EU budget, which is based on the amount of non-recycled plastic packaging waste.

- In addition, the Commission will take the following steps:
- strengthen the disclosure of environmental data by companies in the forthcoming revision of the Non-Financial Reporting Directive
- business initiative support for the development of environmental accounting principles

that complement financial data with circular economy performance data

Proper financial management 3

Proper financial management 3

In addition, the Commission will take the following steps:

- strengthen the disclosure of environmental data by companies in the forthcoming revision of the Non-Financial Reporting Directive
- business initiative support for the development of environmental accounting principles that complement financial data with circular economy performance data
- encourage the integration of sustainability criteria into business strategies, by improving the corporate governance framework
- integration of the objectives related to the circular economy in the context of the forthcoming reorientation of the European Semester and in the context of the forthcoming revision of the state aid guidelines for environmental protection and energy
- continuously encourage the wider application of well-designed economic instruments, such as environmental taxation, including landfill and incineration taxes, and enable Member States to use value-added tax (VAT) rates to promote circular economy activities aimed at final consumers (eg repairs).

Proper financial management 4

Proper financial management 4

encourage the integration of sustainability criteria into business strategies, by improving the corporate governance framework

- integration of the objectives related to the circular economy in the context of the forthcoming reorientation of the European Semester and in the context of the forthcoming revision of the state aid guidelines for environmental protection and energy
- continuously encourage the wider application of well-designed economic instruments, such as environmental taxation, including landfill and incineration taxes, and enable Member States to use value-added tax (VAT) rates to promote circular economy activities aimed at final consumers (eg repairs).

- European companies are pioneers in the field of circular innovations.
- The European Regional Development Fund, through smart specialization, LIFE and Horizon Europe will complement private innovation funding and support the overall innovation cycle to provide market solutions.
- Horizon Europe will support the development of indicators and data, innovative materials and products, the substitution and elimination of hazardous substances based on the "safe from design" approach, circular business models and new production and recycling technologies , including exploring the potential of chemical recycling, taking into account the role of digital tools in achieving circular objectives.

Promoting the transition through research, innovation and digitization 1

Promoting the transition through research, innovation and digitization 1

European companies are pioneers in the field of circular innovations. The European Regional Development Fund, through smart specialization, LIFE and Horizon Europe will complement private innovation funding and support the overall innovation cycle to provide market solutions. Horizon Europe will support the development of indicators and data, innovative materials and products, the substitution and elimination of hazardous substances based on the "safe from design" approach, circular business models and new production and recycling technologies , including exploring the potential of chemical recycling, taking into account the role of digital tools in achieving circular objectives.

[Learn more](#)

Promoting the transition through research, innovation and digitization 2

Promoting the transition through research, innovation and digitization 2

- In addition, Marie Skłodowska-Curie Actions can support the development of skills, training and mobility of researchers in this field.
- Through digital technologies it is possible to monitor the route of products, components and materials, and the safe disposal of the resulting data.
- The European Data Space for Smart Circular Applications will ensure that the architecture and management system provides applications and services such as product passports, resource mapping and consumer information.

- The European Institute of Innovation and Technology will coordinate innovation initiatives for the circular economy in collaboration with universities, research organizations, the industry and SMEs within the knowledge and innovation communities.
- The copyright regime needs to adapt to the digital age and the green transition and support the competitiveness of EU businesses.
- The Commission will propose a copyright strategy to ensure that intellectual property remains a key driver of the circular economy and the emergence of new business models.

Promoting the transition through research, innovation and digitization 3

Promoting the transition through research, innovation and digitization 3

The European Institute of Innovation and Technology will coordinate innovation initiatives for the circular economy in collaboration with universities, research organizations, the industry and SMEs within the knowledge and innovation communities.

The copyright regime needs to adapt to the digital age and the green transition and support the competitiveness of EU businesses.

The Commission will propose a copyright strategy to ensure that intellectual property remains a key driver of the circular economy and the emergence of new business models.

Guidance Efforts on a Global Level 1

Guidance Efforts on a Global Level 1

- The EU can only succeed if its efforts also lead to a global transition to a fair, climate-neutral, resource-efficient and circular economy.
 - It is becoming increasingly necessary to promote discussions on the definition of a "safe place to work", where the use of various natural resources does not exceed specific local, regional and global limits, while the environmental impact remains within the limits of the planet.
 - New sustainable models will create business and employment opportunities for countries with EU prospects, our closest neighbors in the South and the East, emerging economies and our key partners around the world, while strengthening ties with European economic actors.
- To support the global transition to the circular economy, the Commission will take the following steps:

- through the use of the European Strategy for Plastics, will lead international efforts to reach a global agreement on plastics, promoting the adoption of the EU circular economy approach to plastics
- will propose a global alliance for circular economy to address knowledge and governance gaps in promoting a global circular economy, and will strengthen partnership initiatives, including with strong economies.

Guidance Efforts on a Global Level 2

Guidance Efforts on a Global Level 2

To support the global transition to the circular economy, the Commission will take the following steps:

- through the use of the European Strategy for Plastics, will lead international efforts to reach a global agreement on plastics, promoting the adoption of the EU circular economy approach to plastics
- will propose a global alliance for circular economy in order to address knowledge and governance gaps in promoting a global circular economy, and will strengthen partnership initiatives, including with strong economies.

Guidance Efforts on a Global Level 3

Guidance Efforts on a Global Level 3

- will explore the feasibility of defining a "safe place to work", for the use of natural resources and consider launching a dialogue on an international agreement on the management of natural resources
- will forge stronger partnership with Africa to maximize benefits of green transition and circular economy
- will ensure that free trade agreements reflect the objectives of the circular economy

- will continue to promote the circular economy in the Western Balkans integration process and in the framework of bilateral, regional and multilateral EU policy dialogues, forums and environmental agreements, as well as in the context of pre-accession assistance and neighborhood, development programs and international cooperation, including the international platform on sustainable finance
- will intensify promotional activities, including through the European Green Deal diplomacy and circular economy promotional missions, and will collaborate with EU Member States to strengthen the coordination and joint efforts for a global circular economy.

Guidance Efforts on a Global Level 4

Guidance Efforts on a Global Level 4

will continue to promote the circular economy in the Western Balkans integration process and in the framework of bilateral, regional and multilateral EU policy dialogues, forums and environmental agreements, as well as in the context of pre-accession assistance and neighborhood, development programs and international cooperation, including the international platform on sustainable finance

- will intensify promotional activities, including through the European Green Deal diplomacy and circular economy promotional missions, and will collaborate with EU Member States to strengthen the coordination and joint efforts for a global circular economy.

Monitoring Progress 1

Monitoring Progress 1

- In line with the Europe Green Deal and the Annual Sustainable Growth Strategy 2020, the Commission will step up its monitoring of national plans and measures to accelerate the transition to a circular economy as part of the refocusing of the European Semester process, with a view to integrating stronger sustainability parameter.
- The Commission will also update the monitoring framework for the circular economy.
- New indicators based as much as possible on European statistics will take into account the areas of focus in this action plan as well as the links between circularity, climate neutrality and the zero pollution strategy

- At the same time, Horizon Europe projects and Copernicus data will improve the measurement of circularity at various levels not yet reflected in official statistics.
- Further resource use indicators, such as material consumption and footprints, will be developed to assess material consumption and the environmental impact associated with production and consumption patterns.
- They will also be linked to monitoring and evaluating progress towards decoupling economic growth from the use of resources and its effects inside and outside the EU.

Monitoring Progress 2

Monitoring Progress 2

At the same time, Horizon Europe projects and Copernicus data will improve the measurement of circularity at various levels not yet reflected in official statistics.

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Question Bank 1

Unit 2a
1 Ecofriendly Business
1.1 Title
1.2 Term "Eco-friendly" 1
1.3 Term "Eco-friendly" 2
1.4 Term "Eco-friendly" 3
1.5 Term "Eco-friendly" 4
1.6 Eurobarometer suvey 1
1.7 Eurobarometer suvey 2
1.8 Eurobarometer suvey 3
1.9 Eurobarometer suvey 4
1.10 How Important Is Environmental Protection
1.11 Eco-friendly Bussines

1.12 What Are The Most Important Environmental Issues
1.13 Degree of Concern for Environmental Impact Issues
1.14 ECO-FRIENDLY BUSINESS 2
1.15 ECO-FRIENDLY BUSINESS 3
1.16 The Problem of Environmental Protection
1.17 ECO-FRIENDLY BUSSINES 4
2 Circular Economy
2.1 Circular Economy 1
2.2 Circular Economy 2
2.3 Circular Economy 3
2.4 Circular Economy 4
2.5 Circular Economy 5
2.6 Circular Economy 6

2.7 How Circular Economy Works
2.8 Circular Economy 7
2.9 Innovative models of circular economy
2.10 Stages of Linear Economy
2.11 The Circular Economy Provides 1
2.12 Stages of Circular Economy
2.13 The Circular Economy Provides 2
2.14 The Circular Economy Provides 3
2.15 Stages of Linear Economy
2.16 The Goal of Circular Economy
2.17 Differences between linear an circular economy
2.18 Circular Economy Plan
2.19 Policy framework 1

2.20 Policy framework 2
2.21 Purpose of the EU
2.22 Design of sustainable products 1
2.23 Design of sustainable products 2
2.24 EU Initiatives and Legislation
2.25 Parallel Instruments
2.26 Design of sustainable products 3
2.27 Legislative Initiative For A Sustainable Products Policy 1
2.28 Legislative Initiative For A Sustainable Products Policy 2
2.29 Legislative Initiative For A Sustainable Products Policy 3
2.30 Legislative Initiative For A Sustainable Products Policy 4
2.31 Legislative Initiative For A Sustainable Products Policy 5
2.32 Legislative Initiative For A Sustainable Products Policy 6

2.33 Legislative Initiative For A Sustainable Products Policy	7
2.34 Legislative Initiative For A Sustainable Products Policy	8
2.35 Design of sustainable products	1
2.36 Design of sustainable products	2
2.37 Design of sustainable products	3
2.38 Design of sustainable products	4
2.39 Empowering consumers and public sector buyers	1
2.40 Empowering consumers and public sector buyers	2
2.41 Empowering consumers and public sector buyers	3
2.42 Empowering consumers and public sector buyers	4
2.43 Empowering consumers and public sector buyers	5
2.44 Circularity in production methods	1
2.45 Circularity in production methods	2

2.46 Circularity in production methods 3
2.47 Circularity in production methods 4
2.48 Value Chains of Basic Products
2.49 Electronic products and ICT 1
2.50 Electronic products and ICT 2
2.51 Electronic products and ICT 3
2.52 Electronic products and ICT 4
2.53 Electric batteries and vehicles 1
2.54 Electric batteries and vehicles 2
2.55 Electric batteries and vehicles 3
2.56 Electric batteries and vehicles 4
2.57 Packaging 1
2.58 Packaging 2

2.59 Packaging 3
2.60 Plastics 1
2.61 Plastics 2
2.62 Plastics 3
2.63 Plastics 4
2.64 Plastics 5
2.65 Plastics 6
2.66 Textile products 1
2.67 Textile products 2
2.68 Textile products 3
2.69 Textile products 4
2.70 Constructions and buildings 1
2.71 Constructions and buildings 2

2.72 Constructions and buildings 3
2.73 Constructions and buildings 4
2.74 Constructions and buildings 5
2.75 Food, water and nutrients 1
2.76 Food, water and nutrients 2
2.77 Food, water and nutrients 3
2.78 Food, water and nutrients 4
2.79 Improving water policy to support waste prevention and circularity 1
2.80 Improving water policy to support waste prevention and circularity 2
2.81 Improving water policy to support waste prevention and circularity 3
2.82 Improving water policy to support waste prevention and circularity 4
2.83 Improving water policy to support waste prevention and circularity 5
2.84 Improving circularity in an environment free of toxic substances 1

2.85 Improving circularity in an environment free of toxic substances 2
2.86 Improving circularity in an environment free of toxic substances 3
2.87 Improving circularity in an environment free of toxic substances 4
2.88 Creating a well-functioning EU market for secondary raw materials 1
2.89 Creating a well-functioning EU market for secondary raw materials 2
2.90 Creating a well-functioning EU market for secondary raw materials 3
2.91 Dealing with waste exports by the EU 1
2.92 Dealing with waste exports by the EU 2
2.93 Dealing with waste exports by the EU 3
2.94 Making Circularity Functional For Citizens, Regions And Cities 1
2.95 Making Circularity Functional For Citizens, Regions And Cities 2
2.96 Making Circularity Functional For Citizens, Regions And Cities 3
2.97 Making Circularity Functional For Citizens, Regions And Cities 4

2.98 Horizontal Actions
2.99 Horizontal Actions
2.100 Horizontal Actions
2.101 Proper financial management 1
2.102 Proper financial management 2
2.103 Proper financial management 3
2.104 Proper financial management 4
2.105 Promoting the transition through research, innovation and digitization 1
2.106 Promoting the transition through research, innovation and digitization 2
2.107 Promoting the transition through research, innovation and digitization 3
2.108 Guidance Efforts on a Global Level 1
2.109 Guidance Efforts on a Global Level 2
2.110 Guidance Efforts on a Global Level 3

2.111 Guidance Efforts on a Global Level 4

2.112 Monitoring Progress 1

2.113 Monitoring Progress 2



The Project is co-funded by the European Regional Development Fund and by national funds of the countries participating in the Interreg V-A "Greece-Bulgaria 2014-2020" Cooperation Programme



The Project is co-funded by the European Regional Development Fund and by national funds of the countries participating in the Interreg V-A "Greece-Bulgaria 2014-2020" Cooperation Programme

Examples of Eco-friendly Businesses

2

Thanks to Al Gore, and the "Reduce, Reuse, Recycle" campaigns that were strongly promoted during the 1990s, we all know that caring for our environment is essential.

3

With climate change being a growing problem and Earth Day being very close,

there has never been a more important moment to collectively realize how we affect the planet as individuals, companies and businesses.

1

START

Examples of Eco-friendly Businesses 1

Examples of Eco-friendly Businesses 1

"Biodiversity means the diversity of living organisms of all origins, including, inter alia, terrestrial, marine and other aquatic ecosystems and ecological complexes of which they are a part. It also includes diversity within species, between species and ecosystems." In a few words, biodiversity is defined as the diversity of life in all its forms (plants, animals, fungi, etc.) and at all levels of its organization (genes, organisms, ecosystems).

The concept of biodiversity therefore embraces all life on Earth. It includes the way of expressing or appreciating the diversity that exists at the various levels of life organization. It reflects the number, variety and variability of living organisms and the systems that they compose.

- This was quickly realized by some entrepreneurs. One of them is Elon Musk.
- He is one of the most successful entrepreneurs in the world.
- He makes billions of dollars every two minutes almost exclusively through eco-companies such as Tesla and SolarCity.
- Now other companies are starting to follow.
- Let's take a look at environmentally friendly brands that positively impact our planet and find huge commercial success in the process.

Examples of Eco-friendly Businesses 2

This was quickly realized by some entrepreneurs. One of them is Elon Musk. He is one of the most successful entrepreneurs in the world. He makes billions of dollars every two minutes almost exclusively through eco-companies such as Tesla and SolarCity. Now other companies are starting to follow. Let's take a look at environmentally friendly brands that positively impact our planet and find huge commercial success in the process.

TOMS 1

TOMS 1

During a visit to Argentina in 2006, world traveler Blake Mycoskie was disappointed to see how many children were growing up barefoot,

making life incredibly difficult for them and their families

It was then that he had the idea to start a for-profit company that donates a pair of shoes to a child for each pair sold.

TOMS 2

- In 11 years TOMS has donated over 60 million shoes to children worldwide.
- To increase their reach and help more people,
- TOMS has since expanded to provide clean drinking water, as well as other basic necessities all in communities in need around the world.

TOMS 2

Within 11 years of fast promotion, TOMS has donated over 60 million shoes to children worldwide. To increase their reach and help more people, TOMS has since expanded to provide clean drinking water, optical services and safe birth kits, all to communities in need around the world.

- In addition to supporting people, TOMS also respects our planet.
- All their shoes are made with sustainable, recyclable and vegan materials.

TOMS 3

TOMS 3

- The corporate philosophy of TOMS appears in all their brands and their design.

- By presenting photos of children and communities that they support in their marketing material, they are able to build a stronger emotional connection to their mission.

TOMS 4

TOMS 4

The corporate philosophy of TOMS appears in all their brands and their design. By presenting photos of children and communities that they support in their marketing material, they are able to build a stronger emotional connection to their mission.

- The good for the environment and the good for humanity go hand in hand.
- Find a cause / mission you are passionate about and make it the driving force behind your brand.

TOMS 5

TOMS 5

The good for the environment and the good for humanity go hand in hand. Find a cause / mission you are passionate about and make it the driving force behind your brand. If you are already an established company, do not worry! You can even identify a cause that you have strong feelings about (and a green cause in it!) and integrate it into your brand's DNA.

- For example, if you want to deliver clean water to communities in need, make a "corporate takeover" for one month of the year.
- Redesign your website and marketing material to focus on your clean water initiative and give a share of your sales from this month to your cause.
- When your customers see the good you do in the world, an emotional connection will be created.
- They will want to participate in what you do and as a by-product, sales will increase.

TOMS 6

TOMS 6

For example, if you want to deliver clean water to communities in need, make a "corporate takeover" for one month of the year. Redesign your website and marketing material to focus on your clean water initiative and give a share of your sales from this month to your cause. When your customers see the good you do in the world, an emotional connection will be created. They will want to participate in what you do and as a by-product, sales will increase.

Patagonia 1

Patagonia 1

The brand logo

Patagonia 2

Patagonia 2

Patagonia is one of the most successful active clothing retailers in the world, selling almost everything, from snow wear to simple sleeping bags and, because these people usually have an ecological conscience, the corporate philosophy of Patagonia is related to green.

- They have set up repair centers around the world to increase the longevity of their products and reduce the carbon footprint.
- In 2016, the company promised to give \$ 10 million from Black Friday sales to

- environmental grassroots groups dedicated to conserving and improving the planet.
- Patagonia's corporate philosophy is "100% for the planet", however, it is not perfect

Patagonia 3

Patagonia 3

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- They are open and honest about the areas of their company that need improvement,
- such as the use of fossil fuels to produce shells for their coats, which contributes to climate change.
- Patagonia's commitment to change and improve these processes and move towards becoming more sustainable and environmentally friendly sets the company apart from its less green competitors.

Patagonia 4

Patagonia 4

They are open and honest about the areas of their company that need improvement, such as the use of fossil fuels to produce shells for their coats, which contributes to climate change.
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Patagonia 5

Patagonia 5

Advertisement poster of the company with environmental targeting

- The durable design and nature of Patagonia
- speaks to their target audience outdoors.
- It also reflects their commitment to protect the desert that is at the core of the brand.

Patagonia 6

Patagonia 6

The durable design and nature of Patagonia speaks to their target audience outdoors. It also reflects their commitment to protect the desert that is at the core of the brand.

Beyond Meat 1

Beyond Meat 1

The brand logo

Beyond Meat 2

Beyond Meat 2

- If you talk to any environmentalist they will agree that the biggest problem that our generation is facing is climate change.

- And one of the biggest contributors to this environmental crisis?
- The meat industry.

- There is no doubt that meat production has serious negative effects on our environment.
- This is where Beyond Meat begins.
- Beyond Meat revitalizes the food industry by creating delicious "meat" plant products (approved carnivores) that are better for human health, the environment, climate change and animals. In terms of taste, it remains as good as it was before. Through the meat

Beyond Meat 3

Beyond Meat 3

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- The Beyond Meat brand as a whole focuses on the good it does for the environment and its consumers.
- Combining stunning graphics and photos of products that are worthwhile, they can show the benefit from all aspects:
 - how their products save the planet while saving the bodies of their consumers.

Beyond Meat 4

Beyond Meat 4

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Beyond Meat 5

Beyond Meat 5

The packaging of the product from which the environmentally friendly approach of its production emerges.

- Sometimes all you need to do to protect the environment is the packaging.
- If your industry is not traditionally environmentally friendly, put your own eco-friendly 'touch' on things you need to do to protect the planet.
- For example, if you have a small printing company, you can offer a discount to your customers who print on recycled paper.
- There is an opportunity in every business to be greener - even the most unexpected.

Beyond Meat 6

Beyond Meat 6

Sometimes all you need to do to protect the environment is the packaging. If your industry is not traditionally environmentally friendly, put your own eco-friendly 'touch' on things you need to do to protect the planet. For example, if you have a small printing company, you can offer a discount to your customers who print on recycled paper. There is an opportunity in every business to be greener - even the most unexpected. You need to get a little creative.

Wipro EcoEnergy 1

Wipro EcoEnergy 1

The brand logo

Wipro EcoEnergy 2

Wipro EcoEnergy 2

Wipro maintains these high numbers of customer savings.

They are also extroverts about how they have helped the environment.

To date, energy management services have saved over 1.5 billion kWh.

- As a consulting firm, Wipro stays in the background and lets their clients' results speak for themselves.
- This is perfectly evident in their design.
- Their website is clean and simple, reflecting the environmental impact that their services have on their customers and putting focus on the results.

Wipro EcoEnergy 3

Wipro EcoEnergy 3

As a consulting firm, Wipro stays in the background and lets their clients' results speak for themselves. This is perfectly evident in their design. Their website is clean and simple, reflecting the environmental impact that their services have on their customers and putting focus on the results.

- When you go eco-friendly, make it a win-win situation for your customers.
- Wipro was able to reduce customer energy costs and reduce the carbon footprint at the same time.
- Think of ways in which you can show your customers how green practices not only benefit the environment, but also directly benefit them.

Wipro EcoEnergy 4

Wipro EcoEnergy 4

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Lush Fresh 1

Lush Fresh 1

The brand logo

Lush Fresh 2

Lush Fresh 2

Lush Cosmetics is a natural bath and body brand that produces almost everything, from shampoos and perfumes to all types of bath products.

In addition to making people more beautiful, Lush is dedicated to eco-friendly products and practices, such as creating solid shampoo bars to reduce packaging waste and offering free products to customers who bring empty product packaging for recycling.

Their great success and dedication to eco-conscious practices and great green initiatives pave the way for other beauty companies to follow this example.

Lush Fresh 3

Lush Fresh 3

Company products

- Lush's earthy, organic sense of design, products and stores reflects their commitment to our earthly, organic planet.
- Once you come across their brand, you will not be surprised in any way that they are dedicated to green.
- And therefore, they attract the kind of customers who are dedicated to green.

Lush Fresh 4

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Lush's earthy, organic sense of design, products and stores reflects their commitment to our earthly, organic planet. Once you come across their brand, you will not be surprised in any way that they are dedicated to green. And therefore, they attract the kind of customers who are dedicated to green.

- You do not need to be a green company to have green practices.

- No matter what industry you are in, there are ways to incorporate more sustainable practices to make your business more environmentally friendly.
- Implement a recycling program by offering a free product or discount in exchange for recyclable products.
- For example, if you have a clothing boutique, you can offer a discount to customers who bring a clothing bag for donation.

Lush Fresh 5

Lush Fresh 5

You do not need to be a green company to have green practices. No matter what industry you are in, there are ways to incorporate more sustainable practices to make your business more environmentally friendly. Take a page out of Lush's book and implement a recycling program, offering a free product or discount in exchange for recyclable products. For example, if you have a clothing boutique, you can offer a discount to customers who bring a clothing bag for donation.

Numi Tea 1

Numi Tea 1

The brand logo

Numi Tea 2

Numi Tea 2

An excellent tea brand with environmentally friendly production methods is Numi Tea.

Numi Tea has sustainability in its DNA.

Their mission is to unite the mind, body and spirit through tea, and extend this holistic idea in order to help protect our planet.

- They not only talk the talk, but they also walk the walk.
- Everything Numi Tea does is related to their mission: from sustainable packaging to donating to environmental non-profit organizations and to monitoring carbon emissions during the production process.
- They ensure that every step in the supply, production and sale of their tea is environmentally sound.

Numi Tea 3

Numi Tea 3

They not only talk the talk, but they also walk the walk. Everything Numi Tea does is related to their mission: from sustainable packaging to donating to environmental non-profit organizations and to monitoring carbon emissions during the production process. They ensure that every step in the supply, production and sale of their tea is environmentally sound.

Numi Tea 4

Numi Tea 4

Advertisement poster of the company with strong environmental messages

- Numi Tea is also the mind behind OSC2 (One Step Closer to an Organic Sustainable Community),
- a team of CEOs and business leaders from the sustainable natural products industry dedicated to improving sustainability across industries.

- They are committed to improving not only their own practices, but also business practices in general.
- This is the commitment.

Numi Tea 5

Numi Tea 5

Numi Tea is also the mind behind OSC2 (One Step Closer to an Organic Sustainable Community), a team of CEOs and business leaders from the sustainable natural products industry dedicated to improving sustainability across industries. They are committed to improving not only their own practices, but also business practices in general. This is the commitment.

- Everything in the design and brand of Numi Tea is organic and environmentally friendly.
- Just as green practices are part of the DNA of the brand, the environmentally friendly atmosphere is also part of their design DNA.
- Numi uses many earthy colors such as brown in its design and branding.
- This is not very common, but it makes sense for an organic brand.
- When people see brown (the color of the soil) in combination with their overall eco-label, they feel connected to anything earthy.

Numi Tea 6

Numi Tea 6

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- The reason why Numi Tea is so successful in its sustainable practices is because it is part of who they are.
- It is a good idea to incorporate sustainable practices into the core of your corporate mission.
- Let's say you have a surf shop.
- It would be a good idea to make green practices part of your brand by selling only boards made from recycled materials or to organize a monthly beach clean-up with

your team.

Numi Tea 7

Numi Tea 7

The reason why Numi Tea is so successful in its sustainable practices is because it is part of who they are. It is a good idea to incorporate sustainable practices into the core of your corporate mission. When it's part of who you are as a brand, it will penetrate what you do and becoming green will become effortless. Let's say you have a surf shop. It would be a good idea to make green practices part of your brand by selling only boards made from recycled materials or to organize a monthly beach clean-up with your team.

Apple 1

Apple 1

The brand logo

Apple 2

Apple 2

Apple may not say that it uses green methods, but it has made a significant contribution to environmental change.

In 2015, they signed a nearly \$ 1 billion deal with First Solar, the largest solar farm production company in the United States.

Using their technology, Apple empowers all of its California stores, offices, data centers and headquarters with solar power, making it the largest solar contract for a for-profit company in history.

- Apple also focuses on the sustainability of its products and packaging.
- The programme Apple Renew encourages the recycling of old or used Apple devices, while 99% of the packaging paper is recyclable or sustainable.

Apple 3

Apple 3

Apple also focuses on the sustainability of its products and packaging. The programme Apple Renew encourages the recycling of old or used Apple devices, while 99% of the packaging paper is recyclable or sustainable.

- The deal with First Solar was great news and most companies would feel the need to

change their website, design and brand to advertise it.

- But not Apple. They know who they are - a highly respected technology company with a sleek, minimalist design - and they will stay that way, no matter how much they care about the environment.

Apple 4

Apple 4

Apple 5

Apple 5

The Apple solar park in Cupertino

Seventh Generation 1

Seventh Generation 1

The brand logo

Seventh Generation 2

Seventh Generation 2

Seventh Generation is a cleaning company that has revolutionized the cleaning industry with environmentally friendly cleaning products without harmful toxins and chemicals.

It is the combination of being awesome for the environment and awesome for human health.

The company also recently topped Forbes' annual "Best For The Environment" list.

- Similar to Numi Tea, Seventh Generation is really bold with its eco-friendly design.
- Considering that they are so focused on the environment, they certainly feel secure that they pay attention to what their name emphasizes on. (Seventh generation-the 7th generation, that is, there is continuity).

Seventh Generation 3

Seventh Generation 3

Similar to Numi Tea, the Seventh Generation is so bold with its eco-friendly design, it is impossible to miss. Given that they are so focused on the environment, they certainly feel true to their brand.

IKEA

IKEA 1

The brand logo

IKEA 2

IKEA 2

IKEA has invested in sustainability throughout its business activities, including what customers can and cannot do. It starts with their supply chain, where the Swedish furniture maker gets almost 50 percent of its wood from sustainable woodlands and 100 percent of its cotton from farms that meet Better Cotton standards, which require reduced water, energy, chemical fertilizers and pesticides. You can also see their commitment to sustainability in the store.

UNILEVER 1

UNILEVER 1

The brand logo

UNILEVER 2

UNILEVER 2

During a visit to Argentina in 2006, world traveler Blake Mycoskie was disappointed to see how many children were growing up barefoot,

making life incredibly difficult for them and their families

It was then that he had the idea to start a for-profit company that donates a pair of shoes to a child for each pair sold.

- When the CEO Paul Polman talked publicly for the first time in 2010, he said he wanted to double the company's business, halving its environmental impact in just 10 years.

- He has taken amazing steps: three-quarters of Unilever non-hazardous waste does not go to landfills, and the share of agricultural suppliers using sustainable practices has tripled.
- The United Nations awarded the CEO of the company the Champion of the Earth Award in 2015 for his efforts to achieve this goal.

UNILEVER 3

UNILEVER 3

When the CEO Paul Polman talked publicly for the first time in 2010, he said he wanted to double the company's business, halving its environmental impact in just 10 years. He has taken amazing steps: three-quarters of Unilever non-hazardous waste does not go to landfills, and the share of agricultural suppliers using sustainable practices has tripled. The United Nations awarded the CEO of the company the Champion of the Earth Award in 2015 for his efforts to achieve this goal.

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Panasonic 1

Panasonic 1

The brand logo

Panasonic 2

Panasonic 2

Panasonic does not have as much publicity as many other (something Interbrand, which ranks companies in terms of sustainability, calls a "gap"), but consistently earns high marks from experts.

Like many companies on this list, Panasonic has ambitious energy goals,

both in terms of efficiency and renewable energy sources, and also focuses on the production of environmentally friendly products.

- What sets them apart is the way they have incorporated sustainability into their daily lives.
- They moved their North American headquarters from Secaucus, New Jersey to a LEED-certified building in downtown Newark from Penn Station, an intentional move to eliminate the need for employees to drive to work and reduce the carbon footprint.

- They also work with several companies to create a Sustainable Smart Town show in Japan focusing on sustainability.

Panasonic 3

Panasonic 3

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Allergan 1

Allergan 1

The brand logo

- The Venn diagram between environmentalism and Botox has a fairly small overlap, but

in the middle is Allergan, the Botox producer that has been at or near the top of the Newsweek green companies for years.

- The California-based pharmaceutical company began its commitment to sustainability more than two decades ago, with a water conservation policy based on reporting and comparative assessment.

Allergan 2

Allergan 2

The Venn diagram between environmentalism and Botox has a fairly small overlap, but in the middle is Allergan, the Botox producer that has been at or near the top of the Newsweek green companies for years. The California-based pharmaceutical company began its commitment to sustainability more than two decades ago, with a water conservation policy based on reporting and comparative assessment.

Allergan 3

Allergan 3

Their strategy has been developed to save water and energy, reduce waste and emissions in both their immediate operation and supply chain.

In 2016, it won the Environmental Protection Agency's Energy STAR award for the fifth time, recognizing its achievements in energy efficiency.

IBM 1

IBM 1

The brand logo

- IBM was another early adopter of sustainability and eco-friendly business.
- Corporate social responsibility and environmental management have been part of the company's mission since the 1960s.
- Its first sustainability report was published in 1990 and its data centers have received awards from the European Commission for their long-

term success in energy efficiency.

IBM 2

IBM 2

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Its first sustainability report was published in 1990 and its data centers have received awards from the European Commission for their long-term success in energy efficiency.

IBM 3

IBM 3

- Today, IBM's efforts include
- smart buildings that reduce the demand for resources,
- green supplies,
- water resources management and much more for a truly integrated approach.

New Belgium Brewing 1

New Belgium Brewing 1

The brand logo

New Belgium Brewing 2

New Belgium Brewing 2

Colorado-based New Belgium Brewing is the industry leader in sustainability, a moral that unfolds throughout the company, from production to marketing,

in order to encourage employees and customers to ride a bike rather than drive.

Adobe 1

Adobe 1

The brand logo

Adobe 2

Adobe 2

Adobe Systems was the greenest IT company in the Newsweek rankings in 2014, a well-earned distinction.

The company has already made some impressive achievements, including obtaining LEED certification for more than 70% of its workplaces,

including the renovation of a historic building in San Francisco.

- It also has ambitious goals - including zero energy consumption and reduced packaging. The packaging depletes resources and contributes significantly to the pollution of plastics.
- Adobe significantly reduced water use and contributed to the overall reduction in water use to respond to the historic drought in California, having already reduced water use by

more than 60 percent since 2000.

Adobe 3

Adobe 3

It also has ambitious goals - including zero energy consumption and reduced packaging, as packaging depletes resources and contributes to plastic pollution. Adobe was also a corporate leader in reducing water use to respond to California's historic drought, having reduced water use by more than 60 percent since 2000 through means such as installing environmentally friendly lights and landscaping with native plants.

Nike 1

Nike 1

The brand logo

Nike 2

Nike 2

Nike has not always performed well in terms of corporate sustainability, but it has made many changes that do a lot of good.

Nike topped Morgan Stanley's 2015 list of the most sustainable clothing and shoe brands.

The key to their success is the company's strong disclosure regarding its supply chain and production practices.

Nike 3

Nike 3

They also make it easier for designers to make greener choices with an app that helps them

to compare the environmental footprint of different fabrics.

Just like Patagonia, Nike uses recycled materials in some of its products, including the 2011 World Cup jerseys.

Nike 4

Nike 4

It has also redesigned its boxes to reduce packaging,

is committed to eliminating chemical discharges, investing in energy efficiency in its factories and much more.

Nike is also working with NASA and other government agencies to promote innovation in chemistry for the green processing of raw materials into goods.

- From retailers to manufacturers, from financial and high-tech companies, most businesses can now reap the abundant financial rewards that lead their business in an environmentally friendly direction.
- Your company can benefit from tax breaks, government subsidies, savings from environmentally friendly practices and increased popularity and demand, because of your attitude as a green company.

Benefits for Eco-friendly Businesses 1

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From retailers to manufacturers, from financial and high-tech companies, most businesses can now reap the abundant financial rewards that lead their business in an environmentally friendly direction. Your company can benefit from tax breaks, government subsidies, savings from environmentally friendly practices and increased popularity and demand because of your attitude as a green company.

.

2

So, whether you offer insurance or technology services, or run a restaurant or a dry cleaning business,

3

eco-friendly business practices are cost-effective, smart and responsible business goals.

Consumers increasingly demand natural products and social responsibility from suppliers through sustainability and green practices.

1

START

Benefits for Eco-friendly Businesses 2

Benefits for Eco-friendly Businesses 2

"Biodiversity means the diversity of living organisms of all origins, including, inter alia, terrestrial, marine and other aquatic ecosystems and ecological complexes of which they are a part. It also includes diversity within species, between species and ecosystems." In a few words, biodiversity is defined as the diversity of life in all its forms (plants, animals, fungi, etc.) and at all levels of its organization (genes, organisms, ecosystems).

The concept of biodiversity therefore embraces all life on Earth. It includes the way of expressing or appreciating the diversity that exists at the various levels of life organization. It reflects the number, variety and variability of living organisms and the systems that they compose.

- The most important fact is that many are willing to pay more for these values and requirements.
- Nielsen's Global Online Survey this year identified that 66% of its respondents worldwide had this commitment to environmentally friendly products, services and businesses.

- The following green factors were mentioned in the top eight decisive factors:

Benefits for Eco-friendly Businesses 3

Benefits for Eco-friendly Businesses 3

The most important fact is that many are willing to pay more for these values and requirements.

Nielsen's global online survey this year identified that 66% of its respondents worldwide had this commitment to environmentally friendly products, services and businesses.

The following green factors were mentioned in the top eight decisive factors:

- Products from natural, fresh, organic ingredients
- Eco-friendly brand
- A trademark recognized for its social value
- Eco-friendly packaging
- Advertisements highlighting the connection between environmental and social benefits and the brand

Benefits for Eco-friendly Businesses 4

Benefits for Eco-friendly Businesses 4

Products from natural, fresh, organic ingredients

Eco-friendly brand

A trademark recognized for its social value

Eco-friendly packaging

Advertisements highlighting the connection between environmental and social benefits and the brand

Tax Benefits And Other Financial Incentives 1

- The US government understands the need for sustainable and renewable energy.
- In an effort to support this approach, it offers various tax benefits to businesses that are turning green.
- This includes tax breaks, discounts and other financial incentives.
- These financial incentives are offered at both state and federal level. Here are some examples:

Tax Benefits And Other Financial Incentives 1

The US government understands the need for sustainable and renewable energy. In an effort to support this approach, it offers various tax benefits to businesses that are turning green.

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These financial incentives are offered at both state and federal level. Here are some examples:

- Professional discounts for HVAC installation, indoor lighting or hot water systems that significantly reduce energy use
- Tax discounts and grants of 10 and 30 percent for the use of alternative energy properties
- Tax discounts for the use of alternative vehicles that meet specific fuel efficiency standards
- Bonuses for special recycling and reuse of specific equipment or machinery

Tax Benefits And Other Financial Incentives 2

Tax Benefits And Other Financial Incentives 2

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Tax discounts for the use of alternative vehicles that meet specific fuel efficiency standards

Bonuses for special recycling and reuse of specific equipment or machinery

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Tax Benefits And Other Financial Incentives 3

Tax Benefits And Other Financial Incentives 3

The Environmental Protection Agency provides grants for specialized programs related to environmentally responsible approaches for a variety of business activities.

There are also various grants, subsidies and funding programs for a company or entrepreneur seeking to be more environmentally friendly.

Tax breaks are not the only government benefits offered to green companies.

- Small Business Administration (SBA) offers financing solutions to business organizations
- that support green solutions in new constructions, transformations of existing structures and the progress of green technologies.
- These are just a few of the many government grants available to companies that influence environmentally friendly practices and solutions.

Tax Benefits And Other Financial Incentives 4

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Tax Benefits And Other Financial Incentives 5

Business management plan content

- Eco-friendly business measures naturally lead to savings.
 - Practices such as energy saving, recycling, use of water saving devices, energy saving equipment, solar energy and reduced waste
 - help reduce costs and have repeatedly proven to be more efficient and cost effective than traditional energy use.
-
- Green companies and brands are usually more attractive to customers, clients and employees and this appeal is growing steadily.
 - A company can increase sales to new customers who prefer to buy from green businesses.
 - The Nielsen Global Online Survey mentioned earlier, supports this conclusion, as do many other studies and surveys that monitor consumer trends.

Tax Benefits And Other Financial Incentives 6

Tax Benefits And Other Financial Incentives 6

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A company can increase sales to new customers who prefer to buy from green businesses. The Nielsen Global Online Survey mentioned earlier, supports this conclusion, as do many other studies and surveys that monitor consumer trends.

- With employees and consumers recognizing and adding value to environmentally friendly products and companies, it makes sense for any organization to explore this option.
- In fact, if you are committed to green business practices, it makes sense to apply for a green certification, also known as a sustainability certification.
- Winning the certification stamp will help green marketing and promote your achievement to your employees and customers.

Tax Benefits And Other Financial Incentives 7

Tax Benefits And Other Financial Incentives 7

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employees and customers.

- Environmental awareness is growing steadily in Europe, both for companies and citizens.
- According to a survey, 94% of Europeans believe that protecting the environment is important to them personally, and more than half of them say it is very important.
- Citizens and companies are well aware of environmental threats, especially plastic waste, climate change, pesticide use and other threats to biodiversity.

Green will be worth it for businesses in Europe 1

Green will be worth it for businesses in Europe 1

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4

Green will be worth it for businesses in Europe 2

Green will be worth it for businesses in Europe 2

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The concept of biodiversity therefore embraces all life on Earth. It includes the way of expressing or appreciating the diversity that exists at the various levels of life organization. It reflects the number, variety and variability of living organisms and the systems that they compose.

Although their individual environmental impacts are small, their cumulative impacts are significant. In their environmental (non) action, what must be taken into account is the real green consciousness and not their recognition that there is a problem.

They create the most jobs in Europe and most of the EU's GDP.

The European Union economy consists almost entirely of small and medium-sized enterprises (SMEs), amounting to 20 million of them

However, for many businesses and citizens, this environmental attitude has somehow been disconnected from action, even though most people believe they could and should do more.

- This needs to change. Fortunately, companies in Europe are facing plenty of "environmental offers" that provide a timetable and solutions for reductions in energy use, waste materials, water use and recycling efforts.
- Measures for best environmental practices can be found on the Internet with just a few clicks.
- Small and large companies from different sectors also have access to many training opportunities, workshops, labels, services and products to make the production and consumption process truly 'green'.

Green will be worth it for businesses in Europe 3

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- Whether it is eco-innovation funds and capacity building workshops offered by public bodies, public or private organizations, or services offered by associations,
- businesses can have access to green support in most EU Member States at low entry costs.
- Small businesses can also expand their offerings with environmentally friendly products and services, while larger companies can build new markets with cost-effective resources, eco-designed products and so on.

Green will be worth it for businesses in Europe 4

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Why a business should to go green? 1-2

Why a business should to go green? 1-2

If you are not convinced of the socio-environmental responsibility that your business has to take on, you may be more receptive to the benefits of having a green attitude with resource efficiency measures, green products and services and a circular economy.

Resource efficiency, for example, is a simple idea and definitely the first step for entering a circular model.

- The Eco-Management and Audit System (EMAS) refers to all the positive results of each EMAS certified organization, large and small, through audited environmental statements. The results speak for themselves:
 - Between 2012 and 2013, Lufthansa City Line fuel consumption decreased by 2.8%.
 - Hyundai Motor Manufacturing Czech s.r.o. cleans the air with 97% efficiency after painting vehicles.

Why a business should to go green? 3

Why a business should to go green? 3

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The results speak for themselves:

Between 2012 and 2013, Lufthansa City Line fuel consumption decreased by 2.8%.

Hyundai Motor Manufacturing Czech s.r.o. cleans the air with 97% efficiency after painting vehicles.

- Between 2013 and 2014, the Liceu Opera saved more than 26% of energy for heating and domestic hot water – saving 190,000 €.
- The Palau de la Musica Catalana reduced water consumption by more than 23% between 2010 and 2014.
- Between 2011 and 2016 Martins Hotels reduced the total energy use of its 11 hotels by 12.5%.
- Ricoh has revolutionized the printing business, becoming a champion of the circular economy. Ricoh lends printing machines to its customers, allowing the company to maintain, collect, reuse and recycle machine parts.

Why a business should to go green? 4

Why a business should to go green? 4

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- As these examples show, green is becoming more and more attractive as a business strategy.
- Many studies show that companies committed to sustainability perform better financially than their competitors.
- Offering green products and services could be the next step for large and small businesses.
- Today, only 33% of all SMEs in the EU offer green products or services, while the market is in demand in all sectors (4% per year even during the 2008 recession).

Why a business should to go green? 5

Why a business should to go green? 5

As these examples show, green is becoming more and more attractive as a business strategy. Many studies show that companies committed to sustainability perform better financially than their competitors. Offering green products and services could be the next step for large and small businesses. Today, only 33% of all SMEs in the EU offer green products or services, while the market is in demand in all sectors (4% per year even during the 2008 recession).

- At EU level, many labels certify that a product or service is green.
- Among them, the EU Ecolabel promotes excellence in the label field.
- With 40,000 products and services, from children's clothing to electronics, this label helps companies and consumers navigate the green maze.
- It is a trusted label that identifies products and services with reduced environmental impact.

Why a business should to go green? 6

Why a business should to go green? 6

- Recognizing that businesses, governments and consumers are not moving fast enough

to protect the environment, a new economic model is emerging rapidly: a circular economy.

- In a circular economy, the value of products and materials is maintained as much as possible in the system.
- The use of waste and resources is minimized and when a product reaches the end of its life, it is used again to create further value.

Why a business should to go green? 7

Why a business should to go green? 7

Recognizing that businesses, governments and consumers are not moving fast enough to protect the environment, a new economic model is emerging rapidly: a circular economy.

In a circular economy, the value of products and materials is maintained as much as possible in the system. The use of waste and resources is minimized and when a product reaches the end of its life, it is used again to create further value.

- This means local jobs, local products and local benefits in a globalized economy.
- This new model will affect several businesses. The latest EU legislation plans to ban disposable plastics by 2021.
- The food chain will then follow, along with the construction sector, products based on

organic products and, of course, critical raw materials.

Why a business should to go green? 8

Why a business should to go green? 8

This means local jobs, local products and local benefits in a globalized economy. This new model will affect several businesses. The latest EU legislation plans to ban disposable plastics by 2021. The food chain will then follow, along with the construction sector, products based on organic products and, of course, critical raw materials.

[Learn more](#)

Why a business should to go green? 9

Why a business should to go green? 9

- As it is known, the energy sector is the global strategic pillar of growth that primarily concerns the Greek economy,

- while at the same time it is the strongest industry with the biggest, often adverse effect on the natural and cultural resources on which tourism is based.
- Consequently, the importance of the energy and environmental issue at national and international level is great and rightly is more commonly known as New Energy Finance (Bloomberg, 2006).

Why a business should to go green? 10

Why a business should to go green? 10

Especially for Greece, the issue of energy is crucial for its economic development, both because of its almost exclusive dependence on conventional forms of energy (SME), such as domestic and polluting lignite or imported oil and natural or liquefied gas, as well as for the development opportunities offered in a country like Greece, which has the comparative advantage of fundamental geostrategic importance in relation to its energy issues.

[Learn more](#)

Why a business should to go green? 11

Why a business should to go green? 11

- It is confirmed on a daily basis that "green growth", which is based on sustainable resources, is a great opportunity for the future of our country.
 - It is, after all, a clear and achievable national goal, and more relevant than ever today, while we are called upon to face two key challenges:
 - the way out of the grip of the international economic crisis and the effective treatment of environmental problems (mainly in relation to climate change), insofar as they concern our country.
-
- Already in many countries of the world, as well as in Greece, the new environmental economy (RES, recycling, reuse of resources, etc.) has begun to bear fruit.
 - It creates investment opportunities in many sectors, especially in tourism, which is the most comparative and competitive advantage of the Greek economy,
 - while strengthening the overall economic activity and contributing to the creation of new jobs (basic and current problems of our national economy).

Why a business should to go green? 12

Why a business should to go green? 12

Already in many countries of the world, as well as in Greece, the new environmental economy (RES, recycling, reuse of resources, etc.) has begun to bear fruit.

It creates investment opportunities in many sectors, especially in tourism, which is the most comparative and competitive advantage of the Greek economy, while strengthening the overall economic activity and contributing to the creation of new jobs (basic and current problems of our national economy).

- If after all this you are still not convinced that your business should go green, beware: your competition will do just that.

Why a business should to go green? 13

Why a business should to go green? 13

If after all this you are still not convinced that your business should go green, beware: your competition will do just that.

SUMMARY

SUMMARY

Steps to create an eco-friendly business

Eco-friendly Business

Unit 3: How to make a business ECO-FRIENDLY.
Successful examples

Title

Unit 3: How to make a business ECO-FRIENDLY.
Successful examples

Unit 3: "How to make a business ECO-FRIENDLY. Successful examples"

- How to make a business eco-friendly

- Which well-known companies are eco-friendly
- What are the benefits for a business when it becomes Eco Friendly

- There are many steps that can be taken to make a business eco-friendly.
- Whether your business is small or large there are steps you can take immediately to reduce your environmental impact.
- See below these ways to make your business more environmentally friendly.

Steps to create an eco-friendly business

Steps to create an eco-friendly business

There are many steps that can be taken to make a business eco-friendly. Whether your business is small or large there are steps you can take immediately to reduce your environmental impact. See below these ways to make your business more environmentally friendly.

Switch to reusable office supplies 1

- In the United States, more than four million pens are thrown away every day.

- Simply switching to reusable pens, in which the ink can be refilled, could help your business keep a lot of plastic away from landfills.

Switch to reusable office supplies 1

In the United States, more than four million pens are thrown away every day. Simply switching to reusable pens, in which the ink can be refilled, could help your business keep a lot of plastic away from landfills.

Switch to reusable office supplies 2

Switch to reusable office supplies 2

Limit paper waste by replacing sticky notes with desktops, tablets, or laptops with mini-dry erasers.

Taking notes online is another eco-friendly option.

Appoint someone to watch the stationery closet in an effort to help the office turn green.

With someone paying attention to what products you use and waste the most, it may be easier to identify the extra changes you can make.

Practice green procurement eco-friendly business tips 1

- One of the easiest ways to reduce the environmental impact of your business is to practice green procurement.
- Take a look at your suppliers and look for suppliers that provide products that have been produced in a sustainable way.
- Avoid suppliers that use excessive packaging.

Practice green procurement eco-friendly business tips 1

One of the easiest ways to reduce the environmental impact of your business is to practice green procurement. Take a look at your suppliers and look for suppliers that provide products that have been produced in a sustainable way. Avoid suppliers that use excessive packaging.

- Make sure the consumables are free of toxic substances,
- which are harmful to the environment and only buy materials that can be recycled or reused.
- Paying attention to where your supplies and goods come from is a simple way to make your business more environmentally friendly.

Practice green procurement eco-friendly business tips 2

Practice green procurement eco-friendly business tips 2

Make sure the consumables are free of toxic substances, which are harmful to the environment and only buy materials that can be recycled or reused. Paying attention to where your supplies and goods come from is a simple way to make your business more environmentally friendly.

- If possible, find suppliers in your area.
- In addition to supporting your local economy, this could reduce the carbon footprint, . eliminating the need to ship your products and supplies from remote locations.

Practice green procurement eco-friendly business tips 3

Practice green procurement eco-friendly business tips 3

If possible, find suppliers in your area. In addition to supporting your local economy, this could reduce the carbon footprint, eliminating the need to ship your products and supplies from remote locations.

Choose Green Web Hosting 1

Green Web Hosting

Choose Green Web Hosting 1

- Did you know that running all servers in the United States is the equivalent of running five nuclear power plants?
 - Servers need to be up and running continuously, and this causes a lot of environmental damage.
 - By choosing green web hosting, you can ensure that at least some of the energy required to power your site comes from a renewable energy source.
 - This is much more environmentally friendly and very affordable.
-
- Since the hosting company has already saved money by choosing to generate its own energy, it is able to transfer savings to consumers.
 - This usually makes green hosting more accessible than traditional web hosting.
 - It's a great way to make your business more environmentally friendly, while helping you gain the trust of your customers.
 - Green hosting is also reliable, so you do not have to worry about your business going off-

line.

Choose Green Web Hosting 2

Choose Green Web Hosting 2

Since the hosting company has already saved money by choosing to generate its own energy, it is able to transfer savings to consumers. This usually makes green hosting more accessible than traditional web hosting. It's a great way to make your business more environmentally friendly, while helping you gain the trust of your customers. Green hosting is also reliable, so you do not have to worry about your business being off-line.

Reduce energy consumption 1

Reduce energy consumption 1

There are countless ways to reduce energy consumption in offices and other workplaces.

Replace incandescent bulbs with LED bulbs and lights. If possible, consider activating your office using alternative energy.

Wind, solar and geothermal energy are all sustainable options.

Reduce energy consumption 2

Reduce energy consumption 2

As wind and solar energy are becoming more affordable, green energy incentives have become widely available to businesses of all sizes. Business owners can choose to buy energy from green energy sources at reduced rates. In this way, they can reduce their environmental impact while possibly reducing their operating costs.

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[Learn more](#)

Make recycling a priority 1

Make recycling a priority 1

- Recycling is one of the greatest things you can do to make your business more environmentally friendly.
- Whether you work in an office, warehouse or any other type of workplace, there is a good chance you will generate a lot of waste.
- Committing to a recycling program rather than sending all of this waste to landfills can make a huge difference.
- Start by paying close attention to the types of things you throw away.
- Your office is likely to generate more recyclable waste than you realize.
- Paper products, cardboard packaging, beverage bottles, etc. are all obviously recyclable.

Make recycling a priority 2

Make recycling a priority 2

Start by paying close attention to the types of things you throw away. Your office is likely to generate more recyclable waste than you realize. Paper products, cardboard packaging, beverage bottles, etc. are all obviously recyclable.

- However, there are also many less obvious things that can stay away from landfills

through recycling.

- Ink cartridges and toner cartridges, for example, can be sent for recycling or remanufacturing.
- With over 350 million cartridges ending up in landfills each year, your option to recycle can have a huge impact.

Make recycling a priority 3

Make recycling a priority 3

However, there are also many less obvious things that can stay away from landfills through recycling. Ink cartridges and toner cartridges, for example, can be sent for recycling or remanufacturing. With over 350 million cartridges ending up in landfills each year, your option to recycle can have a huge impact.

- There are also ways to recycle old computers and accessories.
- When upgrading, ask the salesperson if he accepts old equipment for recycling.
- Companies such as HP and Dell offer such programs.
- You may also be able to recycle electronic waste at your local office supply store.
- If you need to get rid of computers that are up and running under the age of five, you may be able to donate them to a charity that will repair them.

Make recycling a priority 4

Make recycling a priority 4

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Question Bank 1

Unit 3

2 Steps to create an eco-friendly business

2.1 Title

2.2 Unit 3: "How to make a business ECO-FRIENDLY. Successful examples"

2.3 Steps to create an eco-friendly business

2.4 Switch to reusable office supplies 1

2.5 Switch to reusable office supplies 2
2.6 Practice green procurement eco-friendly business tips 1
2.7 Practice green procurement eco-friendly business tips 2
2.8 Practice green procurement eco-friendly business tips 3
2.9 Choose Green Web Hosting 1
2.10 Choose Green Web Hosting 2
2.11 Reduce energy consumption 1
2.12 Reduce energy consumption 2
2.13 Make recycling a priority 1
2.14 Make recycling a priority 2
2.15 Make recycling a priority 3
2.16 Make recycling a priority 4
1 Examples of Eco-friendly Businesses

1.1 Examples of Eco-friendly Businesses 1
1.2 Examples of Eco-friendly Businesses 2
1.3 TOMS 1
1.4 TOMS 2
1.5 TOMS 3
1.6 TOMS 4
1.7 TOMS 5
1.8 TOMS 6
1.9 Patagonia 1
1.10 Patagonia 2
1.11 Patagonia 3
1.12 Patagonia 4
1.13 Patagonia 5

1.14 Patagonia 6
1.15 Beyond Meat 1
1.16 Beyond Meat 2
1.17 Beyond Meat 3
1.18 Beyond Meat 4
1.19 Beyond Meat 5
1.20 Beyond Meat 6
1.21 Wipro EcoEnergy 1
1.22 Wipro EcoEnergy 2
1.23 Wipro EcoEnergy 3
1.24 Wipro EcoEnergy 4
1.25 Lush Fresh 1
1.26 Lush Fresh 2

1.27 Lush Fresh 3
1.28 Lush Fresh 4
1.29 Lush Fresh 5
1.30 Numi Tea 1
1.31 Numi Tea 2
1.32 Numi Tea 3
1.33 Numi Tea 4
1.34 Numi Tea 5
1.35 Numi Tea 6
1.36 Numi Tea 7
1.37 Apple 1
1.38 Apple 2
1.39 Apple 3

1.40 Apple 4
1.41 Apple 5
1.42 Seventh Generation 1
1.43 Seventh Generation 2
1.44 Seventh Generation 3
1.45 IKEA 1
1.46 IKEA 2
1.47 UNILEVER 1
1.48 UNILEVER 2
1.49 UNILEVER 3
1.50 Panasonic 1
1.51 Panasonic 2
1.52 Panasonic 3

1.53 Allergan 1
1.54 Allergan 2
1.55 Allergan 3
1.56 IBM 1
1.57 IBM 2
1.58 IBM 3
1.59 New Belgium Brewing 1
1.60 New Belgium Brewing 2
1.61 Adobe 1
1.62 Adobe 2
1.63 Adobe 3
1.64 Nike 1
1.65 Nike 2

1.66 Nike 3
1.67 Nike 4
1.68 Benefits for Eco-friendly Businesses 1
1.69 Benefits for Eco-friendly Businesses 2
1.70 Benefits for Eco-friendly Businesses 3
1.71 Benefits for Eco-friendly Businesses 4
1.72 Tax Benefits And Other Financial Incentives 1
1.73 Tax Benefits And Other Financial Incentives 2
1.74 Tax Benefits And Other Financial Incentives 3
1.75 Tax Benefits And Other Financial Incentives 4
1.76 Business management plan content
1.77 Tax Benefits And Other Financial Incentives 6
1.78 Tax Benefits And Other Financial Incentives 7

1.79 Green will be worth it for businesses in Europe 1
1.80 Green will be worth it for businesses in Europe 2
1.81 Green will be worth it for businesses in Europe 3
1.82 Green will be worth it for businesses in Europe 4
1.83 Why a business should to go green? 1-2
1.84 Why a business should to go green? 3
1.85 Why a business should to go green? 4
1.86 Why a business should to go green? 5
1.87 Why a business should to go green? 6
1.88 Why a business should to go green? 7
1.89 Why a business should to go green? 8
1.90 Why a business should to go green? 9
1.91 Why a business should to go green? 10

1.92 Why a business should to go green? 11

1.93 Why a business should to go green? 12

1.94 Why a business should to go green? 13

1.95 SUMMARY



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