greenACT

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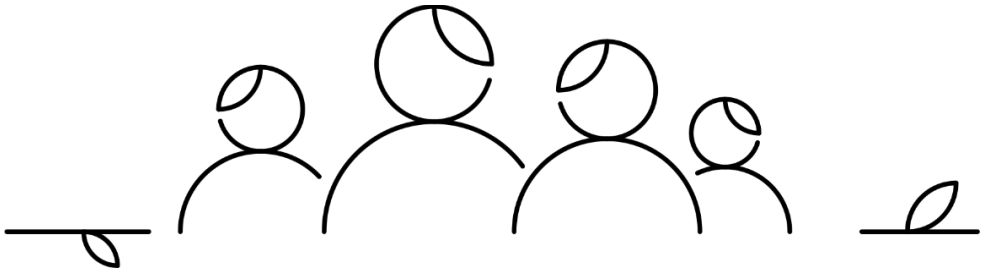

HANDBOOK FOR YOUTH WORKERS

Project number: 2020-3-RO01-KA205-094853

MODULE 1: Human impact in natural systems – environmental challenges

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Project Information

PROJECT: greenACT

PROJECT TITLE: Youth 'agents of change' on Climate Action and Environmental Sustainability

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Contents

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Project information

GreenACT is a 20 months' project designed to enhance ENVIRONMENTAL EDUCATION and AWARENESS of YOUNG PEOPLE through the organization of SUMMER SCHOOL PROGRAMME to familiarize young people with the idea of environmental citizenship, based on the fact that the future depends on each and one of us by acting responsibly and positively towards our environment and developing sustainable solutions for addressing environmental challenges. In a period where Earth faces the consequences of climate change and global warming crisis and the need for mitigation of climate change is emerging, Green-ACT aims to support further these YOUTH INITIATIVES and raise more awareness in the 6 countries, by educating young people on environmental issues, inspire them in developing a firm ecological mindset, and invite them to have a positive impact in their communities as active agents.

The partnership is composed of 6 partners from 6 countries: Romania, Lithuania, Cyprus, Slovenia, Bulgaria, Portugal.

Furthermore, it aims:

- To promote the idea of establishing SUMMER SCHOOLS for raising young people's environmental awareness.
- To set up the GreenACT MOVEMENT (a network of young activists) for coordinating their actions and engaging citizens.
- To build/increase the capacity of partner organizations to act regarding the reduction of waste in the partner countries by encouraging local communities to recycle and reuse.
- To equip youth workers with new sustainable environmental skills to empower younger people.
- To facilitate brainstorming on challenges and possible solutions of topics such as alternative forms of socio-economy, biodiversity and food production, sustainable production and consumption, transport, etc.

This handbook is developed by each partner with the following aims:

1. to empower youth workers to organize and implement activities for young people, to inspire them to have a positive societal and environmental impact in the world.
2. to engage young people in environmental actions with positive impact.
3. to develop the DATA BANK which will contain a wide selection of tools, resources, teaching material, videos, reports, etc. highly useful for YW and YP.

This handbook will have the following modules:

1. Human impact in natural systems - environmental challenges
2. Green living
3. Sustainable communities - Eco-cities
4. Green act movement: become an active agent for the environment
5. EU and national environmental policies
6. Climate Change & our sustainability

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Key Symbols

Symbols	*Explanation*
	Definitions
	Case study
	Additional Resources
	Tips
	Activities
	Reminder
	Video

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General Objective of the Module

The module's main target is to **raise awareness** amongst youngsters when it comes to **environmental issues** through a series of lesson plans. These plans are mainly focused on certain areas of human impact in natural systems, as well as the environmental challenges it imposes. The module focuses on the correlation between the human activity and the natural systems surrounding it through explanations, activities, and examples.

Topics:

1. Different Ecosystems and their Importance

2. Nature protection

3. Biodiversity loss (Biodiversity Convention, Birds Directive, etc.)

4. Urban & Infrastructure Pressure on Ecosystems and Biodiversity

5. Deforestation & Intensive Farming

6. Examples of good practices

Learning Goals

1. **To offer the needed tools** to be able to tell what an ecosystem is, to differentiate the different types, as well as be aware of their importance
2. **To develop certain ideas and types of behaviour** to further protect nature and the surrounding environment
3. **To provide specific knowledge** on biodiversity, invasive species, and general know-how to act
4. **To make the user understand** how the process of urbanization works, and how it affects the ecosystems and the biodiversity
5. **To raise awareness** on the topics of deforestation and intensive farming, as well as to offer the tools and knowledge on different types of agriculture and deforestation
6. **To offer the knowledge** on already existing good practices in terms of the human impact in natural systems – environmental challenges

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1. Different Ecosystems and their Importance

1.1 Different Ecosystems

Ecosystems = Ecosystem is the basic unit of the scientific study of nature. According to this discipline, an ecosystem is a physically defined environment, made up of two inseparable components:

- ***Biotope*** (abiotic): a specific physical environment with specific physical characteristics such as climate, temperature, humidity, nutrient concentration or pH.
- ***Biocenosis*** (biotic): a collection of living organisms such as animals, plants, or microorganisms, which interact continuously and are therefore in a situation of interdependence.

The concept of "ecosystem" can take on many different levels. From multicellular organisms such as insects, animals or plants to lakes, mountain ranges or jungles to the entire planet Earth.

Forest Ecosystem

Forest ecosystems are classified according to tropical, temperate, or subtropical climates. In the tropics, rainforest ecosystems contain more diverse flora and fauna than ecosystems in any other region of the planet. In these hot and humid environments, trees grow tall, and foliage is lush, and dense, with species living from the forest floor up to the canopy. In temperate regions, forest ecosystems can be deciduous, coniferous, or often a mixture of both, with some trees shedding their leaves each fall, while others remain evergreen year-round. . At the extreme north, just south of the North Pole, deep forests - also known as taiga - are home to many trees.

Grassland ecosystem

Different types of grassland ecosystems can be found in grasslands and savannas. Prairie ecosystems are usually found in tropical or temperate regions, although they can also exist in colder regions, as is the case with the famous Siberian steppe. The grasslands share a common climate characteristic of being semi-arid. Plants are sparse or non-existent, but flowers may intermingle with grass. Grasslands provide an ideal environment for herbivores.

Tundra's Ecosystem

As well as the desert, a harsh environment characterizes the tundra ecosystem. In the snowy, windy, treeless tundra, the ground can be frozen year-round, a condition known as permafrost. During the short springs and summers, the snow melts, creating shallow ponds that attract migratory waterfowl. Lichens and small flowers may appear during this time of year. The term

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"tundra" generally refers to polar regions, but at lower latitudes, tundra-like communities known as alpine tundra can be found at higher elevations.

Freshwater Ecosystem

Freshwater ecosystems can be found in freshwater springs, rivers, streams, ponds, lakes, swamps, and marshes. They are divided into two categories: those where the water is almost stationary, like a pond, and those where the water flows, like a stream. Freshwater ecosystems are home to many species of fish: algae, plankton, insects, amphibians, and aquatic plants also inhabit them.

Marine Ecosystem

Marine ecosystems differ from freshwater ecosystems in that they contain salt water, which often supports other types of organisms than freshwater. Marine ecosystems are the richest type of ecosystem in the world. These include not only the ocean floor and surface, but also tidal areas, estuaries and salt marshes, mangroves, and coral reefs.

Explore your area! Ecosystem reflections

Participants are divided into groups of 3-4 people. The task is to explore the community and to find out what types of ecosystems can be found. Remind the participants to not only stick to the big ecosystems presented before, but to take into consideration the smaller ones as well, such as the bacterial ecosystem, flower ecosystem and so on (abiotic or biotic). Time needed:

- 30 minutes to explore the community
- 30 minutes for discussion

Possible questions for debriefing:

1. What did you do?
2. What types of ecosystems did you find?
3. How did you work in your team? Did you have a strategy? Which one?
4. How did you feel doing this activity?
5. What have you learned?

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1.2. The importance of different ecosystems

Ecosystems explain how energy and matter circulate or move through different environments including biotic and abiotic factors. An interactive stable system or biome formed by the interaction of different organisms with each other, and non-living components of the environment is called an ecosystem. Let us understand more about the importance of the ecosystem.

The role of the ecosystem

Key points covering the role of ecology in the world are:

- It is important to have ecological processes and regulations of the energy flow, support of living systems and provide stability.
- It is required to have an extremely important process known as the nutrient cycle, where nutrients in the form of energy and matter are exchanged between biotic and abiotic components.
- It is useful to maintain a good balance between different nutrient levels of the ecosystem.
- Ecosystems allow the recycling of minerals in the biosphere. The biosphere is briefly explained later in the document.
- It produces many organic compounds that help exchange energy between different levels of organisms.
- It enriches people with food, fibre, paper, wood, and medicine; it also provides renewable and non-renewable energy sources.

Why is the ecosystem so important?

The importance of the ecosystem can be understood in terms of the following points and all related terms and factors.

- Conservation of matter and energy takes place in ecosystems, and the energy flowing through the system is balanced as it flows from one organism to another, and matter is recycled.
- The different ecosystems that interact with each other are called the biosphere. So, we can say that the biosphere is the sum total of all global ecosystems.
- An ecosystem includes:
    - A community
    - Biotic ingredients
    - Abiotic ingredients

Biotic and abiotic factors in the ecosystem

In the case of biotic elements, without the producers on this earth, no other life would exist in the world today. These biotic elements are fundamental to the food chains formed by all other ecosystems on earth. For example, a tree produces fruit that can be eaten by humans or any other living organism. The same plant also helps convert carbon dioxide from normal air into oxygen, which is inhaled by humans during the respiratory process. In addition, the plant also stores energy and acts as a decomposition element, which can also be used as fuel. Thus, a single value producer creates more than one life factor on earth, which makes ecosystems more alive and productive than any other living thing on earth.

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Likewise, abiotic factors include all the non-living physical and chemical parts of an ecosystem that shape its environment and help maintain a healthy ecosystem. In terrestrial ecosystems, examples might include temperature, light, and water, and in marine ecosystems, abiotic factors would include salinity and ocean currents.

Conclusion:

An ecosystem is a geographical area where plants, animals, and other organisms, as well as weather and landscapes, interact with the seasons and the environment and strive to coexist. Ecosystems include both biotic and living organisms, as well as abiotic factors including non-living organisms. The biotic factors are the living organisms in an ecosystem including plants, animals, and bacteria while the abiotic factors are the non-living components related to water, soil and atmosphere.

How does the energy flow in the ecosystem - https://www.youtube.com/watch?v=5jBV9vJmXZI

The ecosystems

The group of participants will be split into 4 groups:

- seaweed
- fishes
- pelicans
- humans

Each group will have 2 lives and the following tasks:

seaweed - they will have 2 minutes to find a place to hide. In the moment in which they will find the place, they will not be allowed anymore to move.

fishes - they will also have 2 minutes to find a place to hide. When the activity will start their task will be to find the seaweed and to “eat” it and to hide from the pelicans and humans.

pelicans - they will also have 2 minutes to find a place to hide. When the activity will start their task will be to find the seaweed and the fishes and to “eat” them and to hide from the humans.

humans - they will be allowed to enter the last one. They will have the task to find all the other species and to “eat” them.

Time needed:

- 2 minutes for letting the seaweed to hide
- 2 minutes for letting the fishes to hide
- 2 minutes for letting the pelicans to hide
- 10 minutes for completing the tasks
- 20 minutes for discussions

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Possible questions for debriefing:

1. How was it for you to be involved in such activity?
2. How was it for you to follow the rules?
3. What can we learn from this activity?

This activity can be done with species from different ecosystems (for example with species from forest ecosystems, such as: weed, small birds, predatory birds, humans).

2. Biodiversity and nature protection

Biodiversity must be protected and maintained to preserve life-sustaining conditions on the planet. Protection is required because many organisms and habitats are already threatened by harmful human-induced changes. Biodiversity is conserved by creating nature reserves and protecting different types of habitats and species.

Healthy ecosystems, the interdependent web of living things and their physical environment, are essential for all life on Earth. Our ecosystem provides us with clean air, fresh water, food, resources, and medicine.

Biodiversity, the variability of life on Earth, is a major factor in nature's resilience. In a biodiverse ecosystem, if the environment changes and some organisms can no longer thrive, others can take their place and perform essential functions. It is often the neglected species most important to healthy ecosystems. For example, insects play an important role in pollinating flowering plants – a third of the food we eat depends on pollinators.

On the European level, there is the EU's biodiversity strategy for 2030, a comprehensive, ambitious and long-term plan to protect nature and reverse the degradation of ecosystems. Three of the targets concern the network of nature protection areas. These are:

- increasing the surface area protected so that a minimum of 30% of the EU's land area and 30% of the EU's Sea area are covered by legal protection
- strictly protecting at least, a third of the EU's protected areas, including all remaining primary and old-growth forests
- more effective management of all protected areas

Exploring the ecosystem protection in my community

The first step of the activity - The group of the participants will be divided into small groups of 4-5 participants. Each group will have the task to find at least 5 measures that the local authority from their community takes for the protection of ecosystems.

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The second step of the activity - the same small groups of participants will now have the task to propose some new measures that the community should consider in order to protect the ecosystem.

Time needed:

- 15 minutes for completing the task
- 15 minutes for proposing the new measures
- 20 minutes for discussions

Possible questions for debriefing:

1. What are the measures that you have found?
2. Where did you find the information describing them?
3. What are the new measures that your group wants to propose?
4. What are the measures that people, in general, can take to protect the ecosystems?
6. What have you learned from this activity?

3. Biodiversity loss

Biodiversity loss has many causes, but the biggest culprits by far are habitat destruction and over-exploitation of species, driven by exploding numbers and our unsustainable consumption.

Habitat Destruction

The increase in population brings with itself the need of having more and more living space. Harmful human activities continue to encroach on the natural environment, destroying the habitats of countless species. As our numbers increase, cities, infrastructure, and arable land (see "Agricultural Intensification" below) expand and merge, splitting the remaining habitat and leaving isolated "islands" with natural populations of plants and animals too small to exist. According to IPBES, only a quarter of the land surface and a third of the ocean are left relatively untouched by human activity.

Overexploitation

Population increase also means that the need to have more and more things gets bigger according to the need. Humanity's relentless consumption of resources such as wood, oil and minerals continue to destroy natural habitats around the world. We also put enormous pressure on wildlife populations, both through bush hunting in the developing world and large-scale industrial fishing in our waters. Poaching and wildlife trade remains a major threat to many species, including rhinos, tigers, and pangolins.

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Climate change

With a rising human population number, climate emissions began to grow as well. Our planet is on the verge of a climate crisis due to our relentless production of greenhouse gases, including carbon dioxide and methane. We are headed for a 3-4°C warmer world by the end of this century if the current climate ambitions of nations are fulfilled. We have seen the decline of species due to the increase in global temperature. Each half-degree of warming has a major effect on ecosystems, with mobile species lacking migratory zones and temperature-sensitive organisms such as corals dying out. As key rock species such as reef-building corals disappear, the rich and complex ecosystems they support also collapse.

Pollution

As the population grows, the disposal of waste from households, agriculture and industry is becoming more and more a serious problem. Our oceans are choking with plastic waste that is killing millions of animals, from sea turtles to whales. The Ellen MacArthur Foundation estimates that by 2050 there will be more plastic than fish in the sea. In addition to affecting human life, noise, light and chemical pollution harm the health of wildlife.

Agricultural intensification

The bigger the population, the bigger the need for nourishment and food. Agriculture deserves special mention here as it is one of the main causes of habitat destruction, climate change and pollution. Agriculture accounts for 50% of Earth's habitable land area, 80% of threatened mammal and bird species are due to agriculture, and our modern food system is also a factor. The largest contributor to climate change, is responsible for about a third of all greenhouse gas emissions, more than half of which comes from livestock farming. In response to the unsustainable consumption patterns of the Global North and to feed our huge population, humanity has developed agricultural systems based on monocultures, artificial fertilizers, drugs and insecticides. Monoculture households are increasingly susceptible to disease and therefore require extensive use of pesticides to destroy insect populations. Intensive agriculture leads to soil depletion and runoff from farms contaminates water sources and causes harmful algal blooms and a decline in fish stocks.

Invasive species

Human movement around the world has a huge emissions footprint, but it also facilitates the spread of invasive species, both accidental and intentional. Due to the introduction of non-native species in some areas, such as rabbits and cats in Australia, goats in Saint Helena and American mink in the UK, we have endangered many vulnerable ecosystems, threaten native species, and reduced biodiversity.

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Quiz - Test your knowledge of biodiversity loss!

https://populationmatters.org/test-your-knowledge-biodiversity-loss

https://climateprimer.mit.edu/climate-science

MIT Climate Science, Risk & Solutions is an interactive, online textbook from MIT that can be used as a supplemental resource for high school teachers approaching the topic with their classes. The site offers a historical timeline, graphs, and images to tackle the science, and the slick interactive features will be engaging to teens. Students can scroll through the entire text, or jump among the topics, which are divided into sections: Climate Science, Climate Change, Risk, and Solutions. Each chapter uses different elements to engage students; read-aloud sections, interactive graphs, and short quizzes help break up the dense text.

https://climatekids.nasa.gov/menu/watch/

Debates - Do you think that in the future we will be affected by climate change?

The facilitator will split the room in two, sticking down on the floor the following messages:

- I agree
- I don't agree

The participants will be invited to take part in this activity and to position themselves in the room in accordance with their answers to the next questions/sentences and to explain their answers:

1. It is too late to prevent climate change.
2. Is it the responsibility of the governments to protect nature?
3. In the future the most affected countries by climate change will be the ones that are not so developed.
4. After the COVID-19 restrictions were lifted the pollution levels decreased.
5. Should people focus more on endangered species rather than on the ones that are not at risk?
6. Will the effects of climate change be worse than a disease?
7. The effects of climate change will drive more people into poverty.
8. Now, over two-thirds of the land in Africa is degraded. Does this affect us as Europeans?
9. Do the daily activities that we do increase climate changes?
10. During the COVID-19 pandemic the climate change effects decreased.

Time needed:

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- 30 minutes for debates
- 20 minutes for debriefing

Possible questions for debriefing:

- How did you feel during this activity?
- What have you learned?
- What action can you take in your daily life to protect nature?

4. Urban & Infrastructure Pressure on Ecosystems and Biodiversity

The integration of biodiversity into urban development is important for many Sustainable Development Goals, especially:

- Goal 3. Good health and well-being,
- Goal 6. Drinking water and sanitation,
- Goal 11. Sustainable cities and communities
- Goal 12. Sustainable consumption and production,
- Goal 13. Climate action and
- Goal 15. Life on land.

Cities are often located, and tend to expand, in areas important to biodiversity such as estuaries, coastlines and fertile plains. Biodiversity and ecosystem services - both within cities and beyond borders - are important to urban dwellers because they contribute to food and water supply, temperature regulation, absorption of pollution, reduce vulnerability and disaster risk, and provide accommodations and recreational opportunities that contribute to human well-being, economic stability, and material security. Today, more than half of the world's population lives in towns and cities, a number that will increase to two-thirds by 2050. The projected urban growth and expansion can lead to significant biodiversity loss as natural habitats are fragmented or displaced by infrastructure construction and city expansion.

The pressure on existing urban ecosystems will increase because of predicted climate change effects like floods, droughts, and heat waves. The production of vital ecosystem services in cities will be significantly impacted by the combination of these elements, which will have an adverse influence on the citizens' quality of life. For instance, poorer air quality and less resilience to natural catastrophes are two consequences of the loss of urban ecosystem services. Cities will

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flood more frequently, negatively affecting infrastructure and services like water and sanitation, sewage, and energy delivery. The urban poor is particularly sensitive to these changes because they frequently reside in risky regions, have fewer resources to adapt to changes, and depend heavily on ecosystem services in the area for their livelihoods.

Nature-based solutions are actions that leverage ecosystem services provided by nature to address environmental problems, such as climate change. They are composed of "smart" green infrastructure solutions that alter how urban infrastructure, including roads, drains, floodgates, riverbanks, water and sanitation facilities, electricity supply, and buildings, is thought of, designed, and managed to be resilient to the effects of climate change. Solutions derived from nature have been demonstrated to be resource and cost-efficient. Here are a few illustrations of how to incorporate environmentally friendly ideas into urban planning.

Building natural barriers like mangroves, oysters, and coral reefs in coastal cities can lessen the risk of storm and wave damage, filter contaminated waters, and sustain local fishing communities.

In addition to lowering temperatures and pollution levels and enhancing people's health, planting trees, and creating or restoring green public spaces in cities can boost tourism profits and offer leisure options.

Supporting urban farming in public spaces, as well as in backyards and communal gardens, can increase food security in emergency situations and generate additional income, particularly for women.

Buildings' energy consumption can be decreased, noise levels can be lowered, heat stress can be decreased, and rainwater can be captured and used again.

Floodplain restoration, the development of permeable surfaces, and the installation of stormwater tree pits protect towns from flood damage, enhance the habitats of wild animals, aid in the re-flooding of carbon-rich soils, lower nitrogen loads, and enhance the landscape.

Plant your vegetables! (In order to implement this activity, the young people will need the agreement of the local authority to create the city garden)

The group of participants will be split into groups of 4-5 persons. Each group will have the task to find a place in their community that can be changed into a small garden. Together with the facilitator, the young people will need to choose some vegetables that can be gardened.

The idea of this activity is to involve young people in their community and take advantage of the places that are not used and create a vegetable garden.

Time needed: 1 day to plant the vegetables

Possible questions for the debriefing:

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- How did you feel during this activity?
- What have you learned?
- What action can you take in your daily life to protect nature?

5. Deforestation & Intensive Farming

The number of cattle required to produce beef grows in tandem with global meet demand. Every year, millions of acres of uncultivated land are cleared to make way for feed crops and grazing pastures because these animals require space and food. Forests are being cleared to provide fodder for chickens and pigs, among other animals.

Animals usually need more energy to maintain themselves than they do to provide food for people to eat. Therefore, raising animals for food is always more damaging than raising plants for human use.

On the planet, 45 percent of the land is used for livestock operations, while another 10 percent is set aside for the cultivation of crops used as animal feed. The production of beef alone uses around 60% of the world's arable land, necessitating a sizable amount of space for cattle grazing and the cultivation of feed crops like soy. In the last 20 years, soy production has increased, mostly due to the expansion of animal husbandry. In tropical regions, 1.2 million acres of land are cleared each year for soy farming; if animal protein consumption is not decreased, this amount will rise.

The plant and animal species that inhabit our biodiverse rainforests are frequently the ones most severely impacted by destruction. Not counting the damage caused by recent fires, at least 15% of the Amazon rainforest has already been gone. Most of that land—about 80%—is dedicated to raising crops and establishing livestock grazing pastures.

Although humans have been cutting down trees for thousands of years, the industrial revolution of the nineteenth century increased the demand for lumber and brought to the development of technologies that sped up and simplified the process of clearing land.

Although it is difficult to determine an exact figure, it is estimated that between 3.5 and 7 billion trees are felled each year. Nearly 30% of this estimate is attributed to the rise of agriculture, which includes clearing land for grazing and growing crops for livestock.

Every year, 6.7 million acres of tropical forests are bulldozed or set on fire for the purpose of raising cattle. This is more than five times more harmful than any other product in the area and is responsible for more than half of South America's deforestation.

A silent rival that has doubled in the past 20 years due to the rise in demand for meat and dairy products is soy cultivation for animal feed. Eighty percent of the 346.02 million metric tons of soy produced annually across the world is consumed by animals. In Brazil, soy farming occupies almost 60 million acres completely, and that number is rising in step with the rise in demand for meat.

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Although many different businesses directly or indirectly contribute to deforestation, animal agriculture is the primary culprit. Logging and infrastructure development follow closely. There are certain natural causes of deforestation, such as forest fires and invading species, but they are frequently made worse by human activity.

Logging

The process of chopping and preparing trees to produce goods made of wood. Our trees are heavily logged to construct homes and make paper products.

15 percent of the world's annual greenhouse gas emissions are caused by the logging and conversion of tropical forests. Logging is becoming one of the main causes of deforestation as the world's population rises and more homes are constructed.

Clearcutting is a more intrusive tree removal technique that eliminates all trees and tree seedlings from a region. This kind of logging is frequently employed in ranching to increase the size of croplands and grazing pastures in addition to being used to produce paper and lumber. In addition to endangering the normal regrowth of tree saplings, this rapid clearing of forests also poses a hazard to animal and plant species.

Selective logging, which involves only a few trees being cut down per area, is slightly less invasive and employed for high-value wood products, but smaller trees are still harmed, and local species are still displaced. According to a study, selective logging can increase the total number of trees cut annually rather than decrease it.

Since trees and bushes no longer block water from entering forests, both clearcutting and selective logging make forests more prone to flooding and fires. In addition, logged areas are more exposed to sunshine, which dries them up and makes them more flammable.

Forest Fires

To make room for cattle and feed crops, forests are set on fire, destroying vegetation and wildlife in the process. These deliberate fires, often known as "slash-and-burn fires," disrupt soil fertility, change water cycles, and endanger communities of people who live and work in the forests.

One of the biggest wildfires in recorded history occurred in 1997 because of intentionally started fires that erupted throughout Indonesia. The flames claimed the lives of hundreds of humans, animals, and plants. For months, dense smoke blanketed nearby nations including the Philippines, Thailand, and Malaysia, and locals were urged to stay indoors.

Expansion of Infrastructure

As the world's population grows, cities and highways expand, often to the detriment of biodiverse forests. The Interoceanic Highway, which stretches over 1,600 miles across Brazil and Peru, rips through lush forests to make room for cars and trucks.

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The construction of roads through forests, particularly the Amazon rainforest, increases the likelihood of animal deaths due to habitat loss and motor accidents. New roads also make illegal logging and poaching more convenient. Infrastructure expansion not only displaces animals and increases the risk of deforestation, but it also encroaches on the homes and livelihoods of residents.

013 ARTICLE READING How Does Agriculture Cause Deforestation, and How Can We Prevent It?

https://sentientmedia.org/how-does-agriculture-cause-deforestation/

The Fire in the Mediterranean Region: A Case Study of Forest Fires in Portugal: https://www.intechopen.com/chapters/55996

6. Examples of good practices

There are different initiatives coming from multiples entities that aim to decrease the human impact on nature by:

- the initiative to collect trash from certain areas such as beaches, forests, seas, oceans, mountain trails or even from cities
- the existence of National Parks in each state, meaning there is a slightly larger area protected by the country's government
- switching from fossils fuels to renewable types of energy
- the creation of multiple spaces where the trash can be selectively collected, as well as having legal contexts for littering
- raising awareness campaigns over water or energy waste
- some countries having a concrete curriculum for environmental preservation and protection, as well as teaching children on human impact on the surroundings
- the existence of international agreements such as the Paris agreement from 2015
- promoting public transportation campaigns in big cities
- the initiatives to replant certain areas of forests or to plant new areas
- create more eco-friendly houses

Take action!

The group of participants will have the task to choose an action that they can do at that

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moment, to protect the environment. They will have 10 minutes to think about the action that they want to take and the necessary materials that they need (garbage bags, gloves, laptops etc.)
Time needed:

- 10 minutes
- 60 minutes for implementing the activity
- 20 minutes debriefing

Possible questions for debriefing:

1. How did you choose the activity?
2. Which was your strategy in doing the activity?
3. How did you feel while implementing the activity?
4. What impact do you think this activity will have on your community?
5. What have you learned from this activity?

References

1. Nature and biodiversity - Environment - European Commission - https://ec.europa.eu/environment/nature/index_en.htm
2. Urban development, Biodiversity and Ecosystem - https://cdn.sida.se/publications/files/sida62003en-urban-development-biodiversity-and-ecosystems.pdf
3. Nature & Biodiversity - European Commission - https://webgate.ec.europa.eu/greencitytool/resources/docs/guidance/nature.pdf
4. Biodiversity strategy for 2030 - European Commission - https://environment.ec.europa.eu/strategy/biodiversity-strategy-2030_en
5. Our Climate Our Future project (educational materials for environment protection) - https://ourclimateourfuture.org/resource/discussion-guide/

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6. Global Oneness Project houses resources that explore life experiences around the world - https://www.globalonenessproject.org/
7. You matter world Association - https://youmatter.world/en/definition/ecosystem-definition-example/
8. Population matters - https://populationmatters.org/test-your-knowledge-biodiversity-loss
9. MIT Climate Science, Risk & Solutions - https://climateprimer.mit.edu/climate-science/
10. Climate Kids - Earth Science Communications Team at NASA's Jet Propulsion Laboratory / California Institute of Technology - https://climatekids.nasa.gov/menu/watch/
11. Sentient media - 013 ARTICLE READING How Does Agriculture Cause Deforestation, and How Can We Prevent It? - https://sentientmedia.org/contact/

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greenACT

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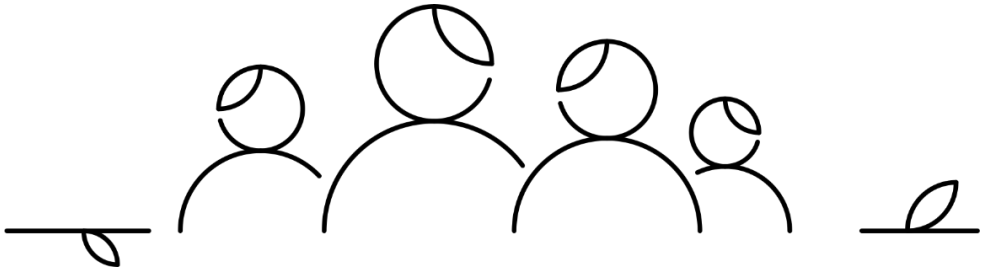

HANDBOOK FOR YOUTH WORKERS

Project number: 2020-3-RO01-KA205-094853

MODULE 2: GREEN LIVING - ADOPTING AN ECO-FRIENDLY LIFESTYLE

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Project Information

PROJECT: greenACT

PROJECT TITLE: Youth 'agents of change' on Climate Action and Environmental Sustainability

ACRONYM: greenACT

PROJECT WEBSITE: https://greenactproject.eu/

PROJECT NO.: 2020-3-RO01-KA205-094853

PROJECT COORDINATOR: ASOCIATIA D.G.T

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greenACT

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Contents

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Project information

GreenACT is a 20 months' project designed to enhance ENVIRONMENTAL EDUCATION and AWARENESS of YOUNG PEOPLE through the organization of SUMMER SCHOOL PROGRAMME to familiarize young people with the idea of environmental citizenship, based on the fact that the future depends on each and one of us by acting responsibly and positively towards our environment and developing sustainable solutions for addressing environmental challenges. In a period where Earth faces the consequences of climate change and global warming crisis and the need for mitigation of climate change is emerging, Green-ACT aims to support further these YOUTH INITIATIVES and raise more awareness in the 6 countries, by educating young people on environmental issues, inspire them in developing a firm ecological mindset, and invite them to have a positive impact in their communities as active agents.

The partnership is composed of 6 partners from 6 countries: Romania, Lithuania, Cyprus, Slovenia, Bulgaria, Portugal.

Furthermore, it aims:

- To promote the idea of establishing SUMMER SCHOOLS for raising young people's environmental awareness.
- To set up the GreenACT MOVEMENT (a network of young activists) for coordinating their actions and engaging citizens.
- To build/increase the capacity of partner organizations to act regarding the reduction of waste in the partner countries by encouraging local communities to recycle and reuse.
- To equip youth workers with new sustainable environmental skills to empower younger people.
- To facilitate brainstorming on challenges and possible solutions of topics such as alternative forms of socio-economy, biodiversity and food production, sustainable production and consumption, transport, etc.

This handbook is developed by each partner with the following aims:

1. to empower youth workers to organize and implement activities for young people, to inspire them to have a positive societal and environmental impact in the world.
2. to engage young people in environmental actions with positive impact.
3. to develop the DATA BANK which will contain a wide selection of tools, resources, teaching material, videos, reports, etc. highly useful for YW and YP.

This handbook will have the following modules:

1. Human impact in natural systems - environmental challenges
2. Green living
3. Sustainable communities - Eco-cities
4. Green act movement: become an active agent for the environment

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5. EU and national environmental policies
6. Climate Change & our sustainability

Symbols	*Explanation*
	Definitions
	Case study
	Additional Resources
	Tips
	Activities
	Reminder
	Video

Key Symbols

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General Objective of the Module

The module's main target is to **raise awareness** amongst youngsters when it comes to **environmental issues** through a series of lesson plans. These plans are mainly focused on certain areas of how people can adapt to an eco-friendlier lifestyle through changes that would not disrupt the quality of their lives. The module itself is also full of examples and in detail descriptions of various methods on how people can be eco-friendlier when it comes to their lifestyle.

Topics:

1. Healthy food consumption

2. Compost and Its benefits

3. Green International Development Cooperation

4. Buying smart

5. Green ways of transportation

6. Examples of good practices

Learning Goals

1. **To define** composting methods method through the needed tools and how it can be used or adapted to each lifestyle
2. **To develop certain ideas and types of behaviour** to further procure healthy food
3. **To be aware of different** methods that can be used to adopt an eco-friendlier lifestyle.
4. **To understand** how to pick the best options and buy smart for themselves.
5. **To be able to** recognise the need and importance of various methods of transportation and to choose the best for both themselves, and as well for the environment.
6. **To offer the knowledge** on already existing good practices in terms of already adopting an eco-friendlier lifestyle.

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1. Healthy food consumption

Healthy food = food that provides you with all the nutrients you need to sustain your own body, its well-being and to be able to retain energy. The key nutrients each body needs are water, carbohydrates, fat, protein, vitamins, and minerals in order to have a well, healthy and balanced diet.

Different types of food and their roles

1. Fruits and berries: sweet and nutritious, they are a key element of a healthy diet. Starting from a young age, people are encouraged to consume as many fruits as possible. Examples of fruits and berries and their traits:
    a. Apples – they are high in fiber, vitamin C and many antioxidants;
    b. Avocados – healthy fats, high in fiber, potassium and vitamin C
    c. Bananas – one of the best sources of potassium, high in vitamin B6 and fiber
    d. Oranges – vitamin C content, high in fiber and antioxidants
    e. Strawberries – highly nutritious, low in carbs and calories
2. Eggs: among the most nutritious foods on the planet
3. Meat: lean and unprocessed meats can be included in a healthy diet. Examples:
    a. Lean beef – one of the best sources of protein when consumed in moderation and it loaded with highly bioavailable iron
    b. Chicken breast – low in fat and calories, however, extremely high in protein
    c. Lamb – high in omega-2 fatty acids
4. Nuts and seeds: although they are high in fat and calories, they may help in weight loss
    a. Almonds - loaded with vitamin E, antioxidants, magnesium, and fiber
    b. Chia seeds - among the most nutrient-dense foods on the planet
    c. Coconuts - loaded with fiber and powerful fatty acids called medium-chain triglycerides
    d. Walnuts - highly nutritious and loaded with fiber and various vitamins and minerals
5. Vegetables: some of the most concentrated sources of nutrients. Examples:
    a. Bell peppers - come in several colors, including red, yellow, and green. They're crunchy and sweet and are a great source of antioxidants and vitamin C.
    b. Broccoli - excellent source of fiber and vitamins C and K and contains a decent amount of protein compared with other vegetables
    c. Cucumber - very low in both carbs and calories, consisting mostly of water
    d. Onions - contain a number of bioactive compounds believed to have health benefits.
6. Grains: they provide a variety of micronutrients and fiber. They're basically fuel for the body. Examples:
    a. Brown rice - fairly nutritious, with decent amounts of fiber, vitamin B1, and magnesium.
    b. loaded with nutrients and powerful fibers called beta-glucans, which provide numerous benefits, including helping to lower cholesterol and feed beneficial bacteria in the gut.
    c. Quinoa - high in nutrients such as fiber and magnesium. It is also an excellent source of plant-based protein.
7. Dairy: a healthy source of various important nutrients. Studies have shown that the most nutritious option is full-fat dairy. Examples:

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a. Cheese - a single slice may offer about the same amount of nutrients as an entire cup (240 ml) of milk.
b. Whole milk - very high in vitamins, minerals, quality animal protein, and healthy fats
c. Yoghourt - yoghurt with live cultures has the added benefit of friendly probiotic bacteria.

All the above mentioned food items can be either purchased from sustainable sources, either from local shops, or eaten in their season. It's way better to eat fruits and vegetables of the "season" when available and to not buy "off-season" ones. This way you can ensure they have safe growth and their quality.

Food consumption – policies at national and international level

There are some policies on EU level on Sustainable Food Systems. The policy foundation for promoting sustainable food systems in developing countries is provided by the following new European strategies:

The Green Deal is built around the Farm to Fork Strategy. It acknowledges the indissoluble linkages between healthy individuals, healthy society, and a healthy environment and completely addresses the difficulties of sustainable food systems.

According to the Strategy, there are four key conditions for sustainable food systems: ensuring that the whole food supply chain—including food production, distribution, marketing, and consumption—has a neutral or favourable impact on the environment;

Assisting in climate change mitigation and preparing for its effects;

Ensuring food security, nutrition, and public health - ensuring that everyone has access to enough, nutrient-dense, sustainably produced food that meets strict standards of quality and safety.

Keeping food prices low while producing more equitable financial benefits along the supply chain, so that eventually the most economical food is also the most sustainable.

The Strategy acknowledges that in order to prevent the externalisation and export of unsustainable practices, efforts to tighten sustainability requirements in the EU food system should be accompanied by policies that help raise standards globally. This is because the production of commodities can have detrimental environmental and social effects in the nations where they are produced (c.f. EC proposal on promoting deforestation-free food products).

In accordance with its goals and the **Sustainable Development Goals** (SDGs), the Strategy declares that the EU will promote the worldwide transition to sustainable agri-food systems. The EU will increase collaboration in particular to enhance.

By enhancing the resilience of food systems and lowering food waste, the EU will increase collaboration in particular to promote nutrition and reduce food poverty. Cooperation will be in the following areas: food research and innovation, with a focus on climate change adaptation and mitigation; agroecology; sustainable landscape management and land governance; conservation and sustainable use of biodiversity; inclusive and fair value chains; nutrition and healthy diets; prevention and response to food crises, especially in fragile contexts; resilience and risk preparedness; integrated pest management; plant and animal health.

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The development of sustainable food systems in developing nations will also help to realize the goals of the new **EU Circular Economy Action Plan** and the international component of the EU Biodiversity Strategy.

The Communication "**Towards a comprehensive Strategy with Africa**" underlines the need for the EU and Africa to collaborate in order to solve the issues of nutrition and food security and achieve the Sustainable Development Goal of eradicating hunger. An agricultural partnership would encourage the development of environmentally sustainable farming methods, support local production, and incorporate biodiversity issues. Setting sanitary and phytosanitary requirements as well as safeguarding natural resources are included in this. Opportunities for sustainable food systems are greatly supported by trade between the EU and Africa.

Following the adoption of the above-mentioned policies

The European Commission has created "a guideline note for integrating climate change and the environment in the agriculture and food systems" in response to the implementation of these policies and plans.

The New European Consensus on Development's framework for action is confirmed and strengthened by these newly agreed initiatives, particularly the importance of sustainable agriculture and sustainable food systems for reaching the SDGs. The new European Consensus on Development highlights the need for sustainable fisheries, agriculture, and food systems that can meet the demands of a growing world population while preserving the environment. To decrease post-harvest losses and food waste, protect soils, conserve water resources, stop, and reverse climate change, the EU and its Member States will promote agroecological practices and measures.

Sustainable agriculture and soils have the potential to reduce greenhouse gas emissions; but, resistance to the effects of climate change has to be improved. The EU and its Member States will support actions to address the effects of illicit fishing, marine pollution, and climate change while promoting sustainable fisheries and aquaculture practices.

In order to address food and nutrition security and promote the transition toward resilient and sustainable agri-food systems, the EU has created geographic and thematic programs for the years 2021–2027.

Did you know?

The participants will be split into 3-4 groups, depending on how big the participant number is. They will be given the task to find an idea for healthy food consumption. Each group will present their idea and will advocate for it, trying to convince the other members of the other groups to join their group. The group with the greatest number of people wins.

Time needed:

- 10 minutes to come up with the idea and how to present it
- 15 minutes to present
- 5 minutes to settle down for the winner group

Possible questions for debriefing:

1. What did you do?

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2. What types of healthy food did you find?
3. How did you work in your team? Did you have a strategy? Which one?
4. How did you feel doing this activity?
5. What have you learned?

Conclusion:

Healthy food is a right everybody should have access to and should consume it. Different legislations, policies and amendments were made on EU and international level. It is important to keep both a healthy mind and a healthy body and through nutrition is the easiest way to maintain a qualitative lifestyle while also protecting the environment.

How to Create a Healthy Plate - https://www.youtube.com/watch?v=Gmh_xMMJ2Pw

Why do we need to change our food system? - https://www.youtube.com/watch?v=VcL3BQeteCc

Let's see how It grows!

The participants will be taken to a study visit to a farm or entity that grows healthy food in a sustainable way. This way they will be able to see for themselves how healthy ingredients can grow in their own climate and area. If agreed on, they can even plant certain plants, if both the weather and the farm allow it.

Possible questions for debriefing:

1. How was it for you to be involved in such an activity?
2. What can we learn from this activity?

2. Compost and Its benefits

Compost is a mixture of ingredients used to fertilise plants and improve the physical, chemical, and biological properties of soil. It is typically made by decomposing plant matter, food waste, recycling organic materials, and manure. The resulting mixture contains a high concentration of plant nutrients as well as beneficial organisms such as bacteria, protozoa, nematodes, and fungi. Compost improves soil fertility and reduces reliance on commercial chemical fertilisers in gardens, landscaping, horticulture, urban agriculture, and organic farming. Compost benefits include providing nutrients to crops as fertiliser, acting as a soil conditioner, increasing the humus or humic acid content of the soil, and bringing beneficial microbes that help to suppress pathogens in the soil and affect soil diseases.

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Composting, at its most basic, entails gathering a mixture of 'greens' (green waste) and 'browns' (brown waste). Greens are nitrogen-rich materials such as leaves, grass, and food scraps. Browns are carbon-rich woody materials such as stalks, paper, and wood chips. The materials degrade into humus over a period of months. Composting is a multi-step, closely monitored process that requires measured inputs of water, air, and carbon- and nitrogen-rich materials. The decomposition process is aided by shredding the plant matter, adding water, and ensuring proper aeration by turning the mixture on a regular basis in a process that employs open piles or "windrows." Fungi, earthworms, and other detritivores break down the organic material even more. The chemical process is managed by aerobic bacteria and fungi, which convert the inputs into heat, carbon dioxide, and ammonium.

Composting is an essential component of management because food and other compostable materials account for approximately 20% of waste in landfills and take much longer to biodegrade in the landfill. Composting provides a more environmentally friendly alternative to landfilling organic waste because it reduces anaerobic methane emissions while also providing economic and environmental benefits. Compost, for example, can be used for land and stream reclamation, wetlands construction, and landfill cover.

Composting is a method of aerobically decomposing organic solid waste. As a result, it has the potential to recycle organic material. Compost is made by decaying biological matter into a humus-like material that serves as a good fertiliser for plants. To function properly, composting organisms require four equally important ingredients:

- **Carbon** is required for power generation; microbial oxidation of carbon generates the heat needed for other parts of the composting period. High carbon materials are typically brown and dry.
- **Nitrogen** is required for more organisms to develop and reproduce in order to oxidise the carbon. High nitrogen materials are typically green and wet. They can also include brightly colored fruits and vegetables.
- The decomposition process requires **oxygen** to oxidise the carbon. Aerobic bacteria require oxygen levels above 5% to perform the composting processes.
- **Water** is required in sufficient quantities to maintain activity without causing anaerobic conditions.

Benefits of doing compost at home:

- Composting is an excellent way to recycle organic waste at home. Food scraps and garden waste account for more than a quarter of all waste. Besides food waste being bad for the environment, it's also expensive to process.
- Compost is a critical tool for enhancing large-scale agricultural systems. Compost contains three essential nutrients that garden crops require: nitrogen, phosphorus, and potassium. It also contains trace amounts of other essential elements such as calcium, magnesium, iron, and zinc. Composting provides an organic alternative to synthetic fertilisers that contain harmful chemicals. Compost has been shown in studies to improve soil water retention capacity, productivity, and resiliency. It can also be used on smaller areas, such as a private garden or a small one.
- By taking care of the food waste, people become more aware of what they use and what they need. Thus, by composting, people can identify their own personal source of waste and try to minimise it in such ways that the compost itself would be reduced too. Composting is a great tool to learn how to stick to your own needs and to not over-consume.

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Composting can be done both indoors and outdoors, depending on the space available and on the climate. It also depends a lot on the source, meaning just kitchen waste or yard waste and as well as on the amount that people would like to spend preparing it. When speaking of the outdoor compost, there are two types of composting: cold, also called passive composting and hot, also called active composting.

Cold composting degrades organic matter slowly, but it requires the least amount of effort and upkeep. Anything organic ultimately decomposes; cold composting is basically letting nature do its thing with minimal intervention on your part. You don't have to worry about the compost ingredient ratio, aeration, or moisture levels. If you have little organic waste to compost, don't have much time to tend to the process, and aren't in a hurry for finished compost, cold composting is the best option. However, depending on the cold method used, it can take one to two years to produce usable compost. Furthermore, a cold composting process is unlikely to reach a high enough temperature during decomposition to kill pathogens, so depending on what you put in the pile, there may be some lingering harmful pathogenic bacteria, fungi, protozoa, worms, and other parasites, as well as weed seeds, in your finished product.

Hot composting is a faster but more controlled composting method. This method necessitates careful attention to maintain the optimal carbon-nitrogen ratio for decomposing organic waste. It also necessitates the proper balance of air and water in order to attract organisms that thrive in an oxygen-rich environment. Under ideal conditions, the final compost product could be ready in four weeks to a year. If properly managed, the high temperature of the pile will kill most weeds, plant diseases, pesticides, and herbicides, as well as any bug larvae or eggs.

However, there are some things people would better avoid composting at home such as: cheese or any dairy products (the odour produced that attracts other living species,), pet waste and cat litter (might contain viruses or bacterias harmful to humans) , treated or painted wood and glossy paper (can contain chemical materials). These elements have different reactions that are much harder to controle, getting a high risk of making the compost unusable, thus all the work for nothing.

How to do compost - steps:

- **Determine how you will collect and store** your browns and greens.Collect and store your fruit and vegetable scraps in a closed container on your kitchen counter, under your sink, or in your fridge or freezer. Set aside an area outside to store a steady supply of leaves, twigs, or other carbon-rich material for browns (to mix with your food scraps).
- **Set aside room for your compost pile** and construct or purchase a bin. Choose a location in your yard for your compost pile that is accessible all year and has good drainage. Avoid putting it right next to a fence and make sure there is a water source nearby. In the sun or the shade, your compost pile will decompose. Next, select a bin type for your pile. Bins can be made from a variety of materials, including wire, wood, and cinder blocks. They can also be enclosed, with barrels and tumblers included.
- **Prepare your compostable ingredient**s. Try to chop and break up your browns and greens into smaller pieces before adding them to the pile (e.g., corn cobs, broccoli stalks, and other tough food scraps). This will aid in the breakdown of the materials in the pile.
- **How to Make a Compost Pile.** Begin with a four- to six-inch layer of bulky browns like twigs and wood chips. This layer will absorb excess liquids, raise your pile, and allow air to circulate at the pile's base. Then, like lasagna, layer your greens and browns. If necessary, dampen the pile with a little water. The right proportions of ingredients in your compost pile will provide the carbon, nitrogen, oxygen, and moisture that composting microorganisms require to break down the material into finished compost.
- **Keep up with your compost pile.** As the materials in your compost pile decompose, the temperature of the pile rises at first, especially in the centre. A well-maintained backyard pile can reach temperatures ranging from 50° to 70° C. High temperatures aid in the reduction of

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pathogens and weed seeds. Turning and mixing your pile on a regular basis will help speed up the decomposition process and aerate it. Turn the outside of the pile inward with a garden fork.

- **Collect your completed compost.** Allow your compost pile to cure, or finish, for at least four weeks after it has stopped heating up after mixing and there are no visible food scraps. You can either separate the oldest compost at the bottom of the pile to cure or stop adding materials to your pile. Your pile will have shrunk to about one-third of its original size after curing.

How to use compost

Before compost can be used, it must completely stabilise and mature. Immature compost can not only harm your plants, but it can also attract rodents and other pests to your yard. To allow your pile to mature, you must stop adding material (although in no-turn systems, the bottom of the pile may provide finished compost even if the top of the pile is still active). Look for the following characteristics in finished compost:

- Crumbly and smooth, with no discernible scraps.
- Smells like a rainy forest or rich earth. The presence of ammonia or sour odors indicates that the compost needs more time to mature.
- Dark and rich in colour
- Size: one-third the size of your original pile
- Temperature: Within -12 degrees Celsius of the outside temperature (especially in the middle of the pile)

Once you've determined that your compost is mature, here are some applications for it:

- It can be used as mulch.
- Mix it into your potting soil.
- Incorporate it into crop beds.
- Spread it on lawns.
- Incorporate it into garden beds.
- Feed it to your houseplants.
- It should be added to the soil around fruit trees.

Compost cannot spoil, but it can become too wet, dry, or old. You can still use old compost; it just won't have as many nutrients as new compost.

Let's do It ourselves!

This activity will be done individually. Each participant will need their own supplies and will learn how to do compost. They will first add the soil in the jar, followed by newspaper and scraps, topped with the yard debris. They will repeat the process until the jar is almost full. After that they will add the water to the jar and write their names on it. The jars will be all set in a sunny area and every two weeks they will check the level of compost by marking a sign on the jar with the marker.

Supplies:

- A wide-mouth glass jar
- Organic yard debris (such as fallen leaves, grass clippings, and dirt)
- Old newspaper
- Fruit and vegetable peels, cores, and scraps from the kitchen
- 1 cup rainwater

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- A permanent marker

Time:

- 40 minutes for preparation

Possible questions for debriefing:

1. What is the type of composting that seems the most interesting to you?
2. What process seems the hardest?
3. Do you think you could start doing compost on your own or would you be considering doing it?
4. What have you learned from this activity?

3. Green International Development Cooperation

Green cooperation, in shorter words, is established in order to promote bilateral cooperation in the field of ecological efficiency. Development of joint activities on the management of natural resources, including groundwater and minerals within specific areas, green areas, places, and so on.

Denmark signed the **Comprehensive Strategic Partnership** with China in 2008. The Partnership offers a framework for collaboration and concentrates on the areas where China and Denmark concur to step up their collaboration. More information regarding Denmark's strategic partnership with China can be found here.

China and Denmark established a collaborative work program (China-Denmark Joint Work Program 2017-2020) to further advance their partnership. The collaborative work program's second phase, which runs from 2021 to 2024, is now being prepared. The main focus will be bilateral collaboration on putting the UN's global goals for sustainable development into action. It is anticipated that sustainable green transformation across all industries would be a key focal area.

The Chinese Ministry of Ecology and Environment (MEE) and the Ministry of Commerce (MOFCOM) jointly released the "**Green Development Guidelines for Foreign Investment and Cooperation**" on July 16, 2021 (Hereinafter referred to as the 2021 Green Guidelines). The Guidelines give equal attention to commerce and investment. Given that MEE is tasked with providing concepts and knowledge and that MOFCOM is in charge of regulating Chinese overseas projects, including their environmental standards, these Guidelines must be seen as having a significant impact on the push for a green BRI where businesses should "follow international green rules and standards" in their overseas economic activities.

The Export-Import Bank of China (EXIM Bank), China Development Bank (CDB), and China Export and Credit Insurance Corporation (Sinosure), as well as China Export and Credit Insurance Corporation (Sinosure), are all specifically copied in the document, addressing policy banks as the primary sponsor of foreign investments. However, only "actions relevant to the green development of Chinese businesses in outbound investment and collaboration" are covered by the Guidelines, which are primarily applicable to enterprises (not commercial financial institutions).
The Guidelines' investment-related aspects are very consistent with the **nine suggestions of the Belt and Road Initiative International Green Development Coalition's** (BRIGC) Green Development Guidance for **BRI Projects** (Belt and Road Initiative), which was released in December 2020 and is supported by MEE. The Guidelines were released just a few weeks after the G7 announced the launch

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of the Build Back Better World (B3W) initiative, which is centered on sustainable development, and only a few weeks after 29 BRI countries announced the Initiative for a Green BRI Partnership, which highlighted the work of the BRIGC and the Green Investment Principles (GIP).

Examples of sustainable development - https://youtu.be/bD-zH_4RbyM

Study visit

The participants will be taken to a study visit to one competent authority that works in a field related to general environmental legislation. They will be shown backstage" how a legislation process looks like and details on how to write one.

Can we do It too?

After the study visit the participants will be split into 5 groups. Each group will try to write a legislation proposal based on the study visit they participated in. At the end, each group will present their proposals and the others will vote on whether they would approve it or not.
Time:
-30 mins to write the proposal briefly
-15 to present it very shortly

Possible questions for debriefing:

- How did you feel during this activity?
- What have you learned?
- What action seem doable for you?

4. Buying smart

Consumption, or spending by individuals on consumer goods and services, is viewed in economics as the main engine of economic development and a key indicator of how productive a capitalist economy is. According to this definition of consumerism, governments should concentrate on encouraging consumer spending because it accounts for the largest share of GDP, or gross domestic product, in the majority of countries. GDP is the total market value of all the goods and services produced by a nation's economy during a given time period.

A social and economic system known as consumerism promotes the purchase of products and services in ever-greater quantities. With the Industrial Revolution, but notably in the 20th century, mass manufacturing brought overproduction. As a result, manufacturers turned to planned obsolescence and advertising to influence consumer purchasing when the supply of items outpaced market demand.

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The Theory of the Leisure Class, a book on consumerism written by Thorstein Veblen and released in 1899, analyzed the pervasive ideals and economic institutions that emerged along with the pervasive "leisure time" at the start of the 20th century. Veblen "views the activities and spending patterns of this leisure class as ostentatious and vicarious consumption and waste" in it. Both concern the status display and have nothing to do with functioning.

The nowadays definition of consumerism known as “high levels of consumption” gained popularity in the 70’s, perceiving consumerism as a frivolous and selfish act, attributing a negative sense to the meaning of the word.

To combat consumerism, as in the sense of over-consuming, people have to know how to buy “smart”. Buying smart is all about how people value the purchases, how they value the products and knowing when to buy and what to buy in order to minimise the over-consumption as well as the waste created after in some cases.

Here are some tips on how to buy “smart”:

1. Do some research first: Whether we are talking about electronics, food, or clothes, people could always do small research first. When it comes to food, people could try to look for the best alternatives and even for the closest ones. If people shop locally, the carbon footprint would be lower compared to shopping from imported sources. Some supermarkets offer the option of getting discounted products that are close to the expiration date. If the person knows for sure they need a certain product at that moment, they could opt for the discounted ones since they will use it right away.
2. Know the limits: people could try to stick only to what they need without overbuying. For example, if a certain recipe needs an x number of apples, people could try to buy the x amount, instead of buying more and letting them go bad, eventually throwing them in the trash, thus creating food waste.
3. Be creative: try to use the “waste” created for other purposes. For example, the lemon peel can be turned into candy, thus no need to throw it out. If things could not be transformed into another edible option, people could always try to make compost for the gardens.
4. Plan your menus for several days or the week: in order to stick to a certain quantity and not over-buy, people could always plan their meals ahead. Search for the recipes, and add the total groceries and that’s how you can get a weekly shopping list if the meals are planned for the entire week.
5. Don’t be afraid to NOT use a brand: typically, a lot of products work just as fine as the “brand” ones. People could try to test other products to see if they work, perhaps in different alternatives (instead of plastic packaging get a cardboard one). If different products with more sustainable packages work just as fine as the “brand” ones, people could switch to this alternative if the price gap would not be an issue for them.
6. STOP buying plastic: a lot of fruits and vegetables come in plastic covers although there is no need for this. Most food products don’t need a plastic cover since they have their own natural cover.
7. Make their own little garden: if people have the resources and the space, they could try to have their own little garden. A good tip is to plant your own spices as they don’t require too much space beside their own pot. Examples of easy-to-grow-at-home spices: are parsley, oregano, mint, thyme, and dill.

   Unfortunately, over-buying, or as is called consumerism, leads to a lot of waste. From electronics waste to fashion waste, to food waste, they all pollute to a certain level. Either air pollution, soil pollution, or water pollution, there is form of it. Through over-buying, there is also a need for overproduction in order for the customers to have their needs fulfilled. Through

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overproduction, the pollution done by the operations themselves increases. If the buying trend decreases, there won't be a need for overproduction, thus influencing the industries to produce less and less.

How does It grow?

The participants will be split into 5 groups. Each group will get a certain type of plant that can be grown at home. They will all have to make a poster presenting the evolution of the plant, the needed materials, and the environment it needs to be kept in.

Ideas for the plants: https://herbsathome.co/the-easiest-herbs-to-grow/

-30 mins to prepare

-15 mins to present

Possible questions for the debriefing:

- How did you feel during this activity?
- What have you learned?
- What action can you take in your daily life in order to reduce your own "consumerism"?

5. Green ways of transport

Sustainable transportation is any mode of transportation that is 'green' and has a low environmental effect. Sustainable transportation is also about balancing our present and future requirements.

As everybody knows, there are a few green ways / eco-friendly means of transportations. The most famous one is the bicycle, whereas lately the electric scooter's popularity has started to rise, while walking has been the oldest one and still used by everybody. For some years now, people have also started carpooling, with apps being created to carpool with other people going in the same direction as you are.

Transportation is, unfortunately, one of the biggest polluters all over the world. With people all over the world choosing their own comfort via driving their own personal car everywhere, to always using cabs or using services for "private" transportation, to frequently taking flights instead of using other means of common transportation, pollution levels are rising, thus contributing to smog and poor air quality. The poorer the quality, the higher the risk of getting sick is.

The environmental implications of transportation are substantial since transportation consumes a considerable amount of energy and consumes the majority of the world's petroleum. This causes air pollution, including nitrous oxides and particles, and contributes significantly to global warming

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through carbon dioxide emissions. Road transport is the most significant contribution to global warming in the transportation sector.

Environmental rules in industrialised nations have lowered the pollution of individual vehicles. This has been compensated, however, by an increase in the number of automobiles on the road and increasing utilisation of each vehicle (an effect known as the Jevons paradox). Some routes for reducing road vehicle carbon emissions have been extensively researched.

Energy consumption and emissions vary greatly between modes, prompting environmentalists to advocate for a shift from air and road to rail and human-powered transportation, as well as increased transportation electrification and energy efficiency.

Other environmental effects of transportation systems include traffic congestion and automobile-oriented urban expansion, both of which can deplete natural habitat and agricultural areas. It is expected that lowering global transportation emissions will have a large positive impact on Earth's air quality, acid rain, smog, and climate change. Transportation's health consequences include noise pollution and carbon monoxide emissions.

While electric cars are being built to cut down CO2 emission at the point of use, an approach that is becoming popular among cities worldwide is to prioritize public transport, bicycles, and pedestrian movement. Redirecting vehicle movement to create 20-minute neighborhoods that promotes exercise while greatly reducing vehicle dependency and pollution. Some policies are levying a congestion charge to cars for travelling within congested areas during peak time.

Leaving your vehicle at home and choosing for more ecologically responsible forms of transportation will help both you and the city. These are some examples:

- Traffic congestion has been reduced.
- Reduced air pollution and associated hazards like asthma
- Greenhouse gas emissions have been reduced.
- decreased reliance on nonrenewable energy sources
- Lower transportation costs
- Physical activity has increased, as has social engagement.
- Local business support and a thriving economy
- Better health and a higher quality of life

Let's move!

The participants will be asked to switch to public ways of transportation for a week while going to school or any other places. They will have to note down if the public transport is inaccessible for them, if it is too over-crowded at the time they are using it and all details that might seem relevant. After they do the small research, they will be split into groups based on the criteria of using the same route and will be asked to share and compare their results. After analysing all the results, they will try to come with solutions on how to decongest traffic, or how to make it more accessible and better for them in order to use it daily.

- 5 minutes to gather the groups
- 30 minutes to discuss in the groups
- 10 minutes to present their conclusions

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Possible questions for debriefing:

1. How was the experience for you?
2. Did you manage to switch from personal vehicles to public transport? Was this a hard change for you?
3. Are you considering using public transport more?
4. How did this experience make you feel?
5. Is there anything missing from your public transport system that you consider should be available?

6. Examples of good practices

Some of the best examples of good practices are already done at home by most people, some of them without even realising the impact that their actions have. Here is a quick list of some examples of good practices already done:

- “Reduce, Reuse & Recycle” - a lot of people either properly select their trash to be recycled, or reuse some items. For example, most people reuse their old jars for storage or other things such as jam or to preserve food. Some people reuse the plastic containers from vegetables as storage spaces for other products. Others reduce their own waste by making compost at home for their gardens. All methods are efficient when it comes to doing something for the environment.
- Disposable items - a lot of people have started bringing their own bags when shopping in order to avoid purchasing new ones.
- Household chemicals - some people even started doing their own cleaners and pesticides using natural and biodegradable chemicals. When cleaning surfaces, vinegar is a great help.
- Renewable energy - mainly people that live in houses have also opted to install solar panels. A couple of years ago, governments of some states supported individuals buying solar panels through some compensation, in order to get more and more people to transition either partially or fully to renewable energy.
- Public transport - people have started using more and more public transport instead of their own personal cars. This switch helps with air pollution and clears out more of the streets, allowing the traffic to be lighter.
- Thrift shopping - lately it has become a trend to a thrift shop or to buy from second-hand stores. This action helps combat the fast fashion industry, thus people buying already “used” items for smaller prices, but still in good shape and usable, and not going back to the big stores that don’t necessarily sell qualitative items.

Who did It before?

Participants will be asked to form a line. The facilitator will read eco-friendly change statements out loud such as „I could use toothpaste tablets instead of toothpaste coming from a tube” or „I could get a reusable water bottle and fill it up instead of always buying single use plastic ones'' and so on. The participants will be asked to take a step forward if they believe they can do the said changes. In the end, we can tell how easy it might seem for others to be eco-friendly and how hard it would be for some. Discussions can be done after if the participants have any questions.

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- 20-30 mins for the game
- 10-15 mins for the discussions

Possible questions for debriefing:

1. How did you feel while implementing the activity?
2. What have you learned from this activity?
3. Do you consider yourself different from the others based on your choices?

References

1. WHY GREEN INDUSTRIAL POLICY SHOULD BE A PRIORITY AREA OF DEVELOPMENT COOPERATION - .https://kina.um.dk/en/about-denmark/green-diplomacy/green-cooperation
2. Interpretation of the "Green Development Guidelines for Foreign Investment and Cooperation" - https://greenfdc.org/interpretation-of-the-green-development-guidelines-for-foreign-investment-and-cooperation/
3. How the world embraced consumerism. - https://www.bbc.com/future/article/20210120-how-the-world-became-consumerist
4. Britannica - definition of consumerism - https://www.britannica.com/topic/consumerism
5. Consumer Protection - Guide to buying smart - https://www.consumerprotection.govt.nz/general-help/guide-to-buying-smart/
6. The easiest herbs to grow - https://herbsathome.co/the-easiest-herbs-to-grow/
7. 50 Foods That Are Super Healthy - https://www.healthline.com/nutrition/50-super-healthy-foods
8. How to Create a Healthy Plate - https://www.youtube.com/watch?v=Gmh_xMMJ2Pw
9. Healthy Eating Plate - https://www.hsph.harvard.edu/nutritionsource/healthy-eating-plate/#:~:text=Make%20most%20of%20your%20meal,grains%20%E2%80%93%20%C2%BC%20of%20your%20plate.
10. What Is Holistic Health? Overview and Career Outcomes - https://www.stkate.edu/healthcare-degrees/what-is-holistic-health

This project has been funded with support from the European Commission. This communication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

11. Green Eco Tips for Sustainable Living - https://www.globalstewards.org/ecotips.htm
12. Compost - https://en.wikipedia.org/wiki/Compost
13. Composting 101 - https://www.nrdc.org/stories/composting-101

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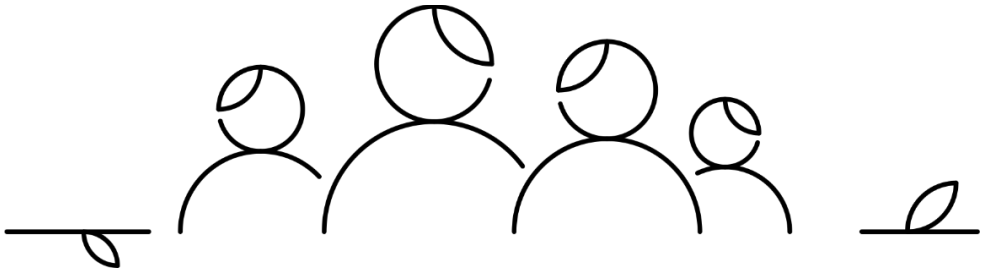

HANDBOOK FOR YOUTH WORKERS

Project number: 2020-3-RO01-KA205-094853

MODULE 3: Sustainable communities – Eco-cities

greenACT

Co-funded by the Erasmus+ Programme of the European Union

Project Information

PROJECT: greenACT

PROJECT TITLE: Youth 'agents of change' on Climate Action and Environmental Sustainability

ACRONYM: greenACT

PROJECT WEBSITE: https://greenactproject.eu/

PROJECT NO.: 2020-3-RO01-KA205-094853

PROJECT COORDINATOR: ASOCIATIA D.G.T

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greenACT

Co-funded by the Erasmus+ Programme of the European Union

Contents

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Project information

GreenACT is a 20 months' project designed to enhance ENVIRONMENTAL EDUCATION and AWARENESS of YOUNG PEOPLE through the organization of SUMMER SCHOOL PROGRAMME to familiarize young people with the idea of environmental citizenship, based on the fact that the future depends on each and one of us by acting responsibly and positively towards our environment and developing sustainable solutions for addressing environmental challenges. In a period where Earth faces the consequences of climate change and global warming crisis and the need for mitigation of climate change is emerging, Green-ACT aims to support further these YOUTH INITIATIVES and raise more awareness in the 6 countries, by educating young people on environmental issues, inspire them in developing a firm ecological mindset, and invite them to have a positive impact in their communities as active agents.

The partnership is composed of 6 partners from 6 countries: Romania, Lithuania, Cyprus, Slovenia, Bulgaria, Portugal.

Furthermore, it aims:

- To promote the idea of establishing SUMMER SCHOOLS for raising young people's environmental awareness.
- To set up the GreenACT MOVEMENT (a network of young activists) for coordinating their actions and engaging citizens.
- To build/increase the capacity of partner organizations to act regarding the reduction of waste in the partner countries by encouraging local communities to recycle and reuse.
- To equip youth workers with new sustainable environmental skills to empower younger people.
- To facilitate brainstorming on challenges and possible solutions of topics such as alternative forms of socio-economy, biodiversity and food production, sustainable production and consumption, transport, etc.

This handbook is developed by each partner with the following aims:

1. to empower youth workers to organize and implement activities for young people, to inspire them to have a positive societal and environmental impact in the world.
2. to engage young people in environmental actions with positive impact.
3. to develop the DATA BANK which will contain a wide selection of tools, resources, teaching material, videos, reports, etc. highly useful for YW and YP.

This handbook will have the following modules:

1. Human impact in natural systems - environmental challenges
2. Green living
3. Sustainable communities - Eco-cities
4. Green act movement: become an active agent for the environment
5. EU and national environmental policies
6. Climate Change & our sustainability

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Symbols	*Explanation*
	Definitions
	Case study
	Additional Resources
	Tips
	Activities
	Reminder
	Video

Key Symbols

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General Objective of the Module

This module aims to provide learners with more in-depth knowledge of the concept of **sustainable communities**. It will define and go over different methods, integrated into our society, which allow us to lead a more environmentally friendly lifestyle. By observing concepts, such as water and waste management, ecological innovations and more, the module aims to inspire learners to take a more eco-conscious approach in the decision-making process of their everyday lives.

Topics: You will be able to find in this document the following topics:

1. **Eco-innovation & Entrepreneurship**
2. **Sustainable Urban Development**
3. **Alternative Transportation (emissions-free/electric vehicles and public transportation, alternative ways of transportation)**
4. **Waste Management and the 5R's**
5. **Water Management, Quality & Access**
6. **Examples of good practices**

Learning Goals

1. Introduce the learners to the **environmental benefits** of sustainable products
2. **Learning** what some of the largest businesses are doing to reduce the footprint
3. The purpose of the lesson is **to Inspire** learners toward improving their energy efficiency.
4. **To define** the term "Sustainable Urban Development" and encourage learners to brainstorm of new practices, which can help their cities reach a higher level of sustainable urban development
5. **To specify** why sustainable transportation should be chosen rather than using a car.
6. **To encourage** the active use of alternative transportation.

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1.Eco-innovation & Entrepreneurship

Eco-innovation has gained widespread acceptance as a means of enhancing many businesses' environmental performance and assisting them in the process of developing new products. Nowadays, sustainable packaging, innovative and 100% recyclable phone boxes, and many other environmentally friendly products are becoming increasingly popular. Hence, being able to differentiate between which products are good for the planet and which are harmful has become an essential skill.

The main goal of this topic is the learners to introduce to them the environmental benefits of sustainable products. Participants will have to brainstorm new ecological innovations that can be implemented in their cities. They will have to create an executive plan about how/where they will create their products, how it will be distributed, why the product is beneficial and what

Definition

- This is the way to benefit by developing products or services, improving environmental sustainability, and using commercial strategies.
- Innovation that originates from ecosystems. Eco-innovation is related to eco-technology. The goal of eco-innovation is to solve environmental problems and become more competitive. Eco-innovation is also related to smart cities
- The development of processes, products and services in ensuring human, economic, social and environmental sustainability.
- Innovation of goods and/or services as well as in production, exploration, production, management, or business processes that seeks to reduce both environmental risks and the use of natural resources.
- Innovative in production process which consent to a reduction of environmental risk and benefited to society and stakeholders.
- The concept refers to making substantial and measurable progress toward the objective of sustainable development by minimizing environmental effects and increasing environmental resilience.

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Activities

Linked with Topic 1 – Lesson Plan

Video

Video 1- https://www.youtube.com/watch?v=6L_ipFvVtWE&t=1s

Video 2- https://www.youtube.com/watch?v=li0EpfSbOJg

2.Sustainable Urban Development

Through sustainable urban development, the so-called 'eco-cities' are able to reduce the effects of climate change. Cities, which fall into this category, tackle global warming by:

- creating more green spaces within their territories
- being able to use renewable energy to power themselves
- strictly controlling sources of pollution
- encouraging ecological means of transportation over personal vehicles

The benefits of those actions are better living conditions, economic growth, less waste of valuable resources, improved health and more. While working on this topic, learners will be assigned the task to explore the practices executed in their hometowns and suggest what need to be done, for their cities to reach a higher level of sustainable urban development.

The aim of the module is to define the term "Sustainable Urban Development" and encourage learners to create visual materials containing good environmental practices, already implemented in advanced eco-cities, which can help participants' hometowns reach a higher level of sustainable urban development.

Definition

- Improving the quality of life in a city, including ecological, cultural, political, institutional, social and economic components without leaving a burden, e.g., the result of a reduced

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natural capital and an excessive local debt, on the future generations—and thus forming the sustainable city.

- Promoting urban growth in line with the present needs without compromising the needs of future generations.

Activities

Linked with Topic 2 – Lesson Plan

Article

Article - 6 Traits of a Sustainable City https://www.digi.com/blog/post/sustainable-city

Video

https://www.youtube.com/watch?v=fsWr0LfM_uQ&ab_channel=GoingGreen

3.Alternative Transportation

By definition, alternative transportation includes using "eco" vehicles with a low environmental impact. The dangerously high levels of carbon emissions, due to the increasing number of cars in

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the cities, has incited society to turn to less harmful to the environment means of transportation. Some of the main alternative transportation methods include walking, biking, taking the bus, tram or a train, carpooling, etc.

The topic aim to specify why sustainable transportation should be chosen rather than using a car and thus, understand the environmental concerns that come from modern transportation means. At the end to encourage people to use alternative transportation choices that can be implemented in their day-to-day lives.

Tips

- Walking
- Biking
- Bus
- Mass Transit Rail
- Train
- Carpooling
- Car sharing
- Alternative fuel Vehicles
- Electric / Hybrid Vehicles

Activity

Linked with Topic 3 – Lesson Plan

Video

https://www.youtube.com/watch?v=VJXXVnUE1Ts&ab_channel=EcoMasteryProject

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4.Waste Management and the 5R's

As a result of the population increase, the generation of waste is doubling with each day causing negative effects on the lives of many. Many waste slums have formed as a result of the accumulation of trash around the world, specifically around coasts. Single-use plastic materials, alongside other non-degradable components, present the biggest environmental threat. To tackle the issue, the method of the 5R's has been introduced. Essentially, the abbreviation has many interpretations, but generally stands for refuse, reduce, reuse, repurpose, and recycle.

The module will focus on creating a video on the 5R's (how to reduce their plastic consumption, new ways for repurposing used plastic containers), which will encourage the integration of the 5R's in the learners' and viewers' everyday lives.

Case study

According to the 5 R's, four actions should be taken, if possible, prior to 'recycling': refuse, reduce, reuse, repurpose, and then recycle. Incorporating this methodology into your business' waste reduction and recycling efforts will minimize landfill waste and help take your recycling program to the next level.

4.1 How to apply the 5Rs

Applying the 5 R's to your business' waste management and recycling strategies can positively impact the outcome of your program by significantly reducing the amount of waste your business generates. In the 5 R's hierarchy, remember to treat recycling as a last resort. Before disposing of your waste, walk through each of these steps in the following order:

STEP ONE: REFUSE

Refuse: the first element of the 5 R's hierarchy. Learning to refuse waste can take some practice but incorporating this step into your routine is the most effective way to minimize waste. If you own a business, talk to your procurement team about refusing to buy wasteful or non-recyclable

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products. When working with vendors, refuse unnecessary product packaging and request reusable or returnable containers. Making smarter purchasing decisions and setting standards and expectations early in the process makes it easier for organizations to “refuse” waste in the first place.

STEP TWO: REDUCE

Reduce the use of harmful, wasteful, and non-recyclable products. Reducing dependency on these kinds of products results in less waste materials ending up in landfill and the associated negative environmental impacts. We recommend always using the minimum amount required to avoid unnecessary waste. For example, when printing a document, print double-sided to cut your waste output in half. Other commonly used items you can focus on reducing include single-use plastics, plastic packaging, organic waste, and Styrofoam cups.

STEP THREE: REUSE

Single-use plastics have created a "throw-away" culture by normalizing consumer behavior of using materials once and then throwing them away. The rate at which we consume plastics has become unimaginable, and the plastic crisis has become one of the world's greatest environmental challenges. To reduce waste, reuse items instead of buying new ones. Begin by focusing on one area of your life at a time, like your kitchen. Replace all of the single use eating utensils, Styrofoam cups, water bottles, and paper plates with compostable or reusable alternatives. Once you master one area, prioritize reuse for other products like packaging, printer cartridges, cardboard boxes, food containers, and rechargeable batteries.

STEP FOUR: REPURPOSE

For every item that can't be refused, reduced, or reused, try repurposing it. Many people in the green community refer to this method as upcycling. You may be surprised to learn how many common products serve more than one purpose. Sometimes it requires using some creativity, but the possibilities are endless. Try using wasted printer paper for scrap paper, cardboard boxes for storing supplies, binder clips to hold power cords and chargers in place, and even mason jars, coffee mugs, and tin cans for holding pens and pencils. Encourage your family to add items to the station they no longer need and to check there before purchasing new supplies.

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STEP FIVE: RECYCLE

Last but definitely not least: recycle. Once you've gone through all the other R's, recycling is the most environmentally friendly waste disposal method. If your family doesn't already, start collecting cardboard, mixed paper products, commingled materials (plastics, aluminium, glass) and organics.

Activity

Linked with Topic 4 – Lesson Plan

Article

https://galleryclimatecoalition.org/news/60-what-are-the-5-rs-of-the-waste/

5.Water Management, Quality & Access

This module will point out to learners how certain actions, which seem harmless, are negatively influencing the quality of the water at national and international levels. They will learn what micro-plastics are and where they can be found. As a task, learners will have to create a list with products containing large quantities of micro-plastics and suggest sustainable alternatives.

Definition

Water quality refers to the chemical, physical, and biological characteristics of water based on the standards of its usage. It is most frequently used by reference to a set of standards against which compliance, generally achieved through treatment of the water, can be assessed.

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Access to water according to the United Nations General Assembly established the 17 Sustainable Development Goals (SDGs) means

- Access to drinking water.
- The access to sanitation and hygiene.
- Water quality and the management of wastewater.
- The efficient use of water resources.
- Integrated management of water resources.
- Protection of water-related ecosystems.
- A Building of management capacities.
- Participation of local communities in management.

Activity

Linked with Topic 5 – Lesson Plan

Video

https://www.youtube.com/watch?v=ZHCgA-n5wRw&ab_channel=NationalGeographic

6.Good Practices in the field of Green Cities

The goal is to define the best practice in the field of eco – cities around the world and to extract the most eligible resources and methods to apply at local level in order to improve our surrounding. The learners will be able to understand what 'good practices' are and why they are needed. Moreover, participation is such activities will be highly encouraged.

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Definition

There are several ways to define "good practices." However, a theme that runs across most definitions is that they all refer to tactics, methods, and/or activities that have been demonstrated via study and assessment to be reliable in producing the intended results and to be successful, efficient, sustainable, and/or transferrable.

Examples of good practices

GP 1- Incentives for Electric Vehicles in the EU

Most EU member states have begun to provide up to 5000 EUR as financial support to citizen for electric vehicle purchases. Moreover, in most parts of the EU, EV are a subject from partial to full exemption of some mandatory taxes.

GP 2- 2LIFES projects by Interreg Europe

"The project is meant to be an instrument to help boost re-use through public policies… 2LIFES focuses exclusively on re-use and more specifically on re-use activities promoted by public administrations – something pending as it is usually promoted by the third sector."

GP 3- WWF's charity swimming challenge

Swim so that they can swim too is the name of WWF Bulgaria's challenge aiming at supporting the protection of Bulgarian rivers' water quality and their inhabitants.

Activity

Linked with Topic 6 – Lesson Plan

Article

https://ec.europa.eu/migrant-integration/page/what-are-good-practices_en#:~:text='Good%20practices'%20can%20be%20defined,lead%20to%20a%20desired%20result

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References

https://www.igi-global.com/dictionary/eco-innovation/44777

Traits of a Sustainable City: https://www.digi.com/blog/post/sustainable-city

https://www.youtube.com/watch?v=fsWr0LfM_uQ&ab_channel=GoingGreen

https://www.igi-global.com/dictionary/knowledge-based-urban-development/41748

https://www.youtube.com/watch?v=VJXXVnUE1Ts&ab_channel=EcoMasteryProject

https://galleryclimatecoalition.org/news/60-what-are-the-5-rs-of-the-waste/

https://www.roadrunnerwm.com/blog/the-5-rs-of-waste-recycling

https://www.wearewater.org/en/what-do-we-mean-when-we-talk-about-access-to-water_346091

http://www.interregeurope.eu/2lifes/

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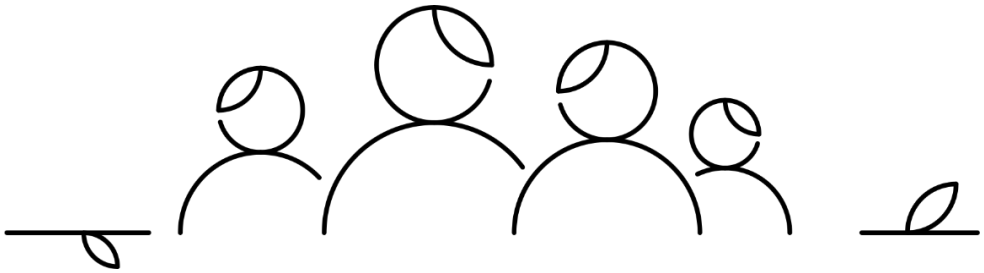

HANDBOOK FOR YOUTH WORKERS

Project number: 2020-3-RO01-KA205-094853

MODULE 4: Green act movement: become an active agent for the environment

Brigada Do Mar

greenACT

Co-funded by the Erasmus+ Programme of the European Union

Project Information

PROJECT: greenACT

PROJECT TITLE: Youth 'agents of change' on Climate Action and Environmental Sustainability

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Contents

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Key Symbols

Symbols	*Explanation*
	Definitions
	Case study
	Additional Resources
	Tips
	Activities
	Reminder
	Video

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General Objective of the Module

This module aims to show both the importance and the examples of active movements towards environmental protection and ultimately motivate people to become active agents for the environment.

For that, it is not only crucial to be motivated but also well-educated and aware of the importance of the environment and the impact that human actions have on their ecosystems. And to become an effective agent of change, it is equally important to know how this can be resolved and balanced, offering valid alternatives and showing good practices at different levels. Finally, in this module, the objective is to inform and teach how to develop an active movement, develop strategies and networks, search for ways of funding and how to build a team and organise events.

Topics:

1. **Community initiative and action**
2. **NGO's climate action**
3. **Community environmental awareness**
4. **Sponsorship**
5. **CSR (Corporate Social Responsibility)**
6. **Examples of good practices**

Learning Goals

1. To **demonstrate** the importance of community initiatives and **motivate** people to become active agents for the environment;
2. To **demonstrate** the vital role of NGOs in environmental and biodiversity protection and climate action;
3. To **identify** the main NGOs at the International, European and National levels;
4. To **emphasise** the importance of developing community environmental awareness and learning how to mobilise knowledge and resources within communities;
5. To **understand** the importance of Sponsorship in regard to environmental action;
6. To **decode** the term Corporate Social Responsibility and **understand** its importance and role at the cooperative level of different entities;
7. To **have** a deeper understanding of how corporations can take social responsibility into action;
8. To **show** examples of good individual practices, inspiring volunteering movements and vital organisations in the green movement.

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1. Community initiative and action

1.1 Short Description

In this topic, the aim is to demonstrate that community initiatives, civil society movements and actions, even individuals, can have a great impact on raising awareness about environmental protection. Therefore, the topic is focusing on community initiatives and their importance in educating the community, influencing lifestyles and demanding political laws changes in favour of the environment and all the living beings that depend on it.

Learning Goals:

a) Main Objectives:

- To demonstrate the importance of community initiatives;
- To motivate people to become active agents for the environment;
- To identify the main NGOs at the international, European and national levels.

b) Knowledge:

- To know what community initiatives and actions are;
- To understand their importance for the environment;
- To learn about different initiatives;
- To learn different ways of public actions.

c) Skills:

- To identify community initiatives;
- To inform other people about the matter;
- To be able to be involved.

d) Attitude:

- To be motivated to become active and develop/support initiatives that help the environment;
- To be aware of him/her/their impact.

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Activity 1: Team-building / Brainstorming

In small groups, participants will brainstorm on what to take into consideration for creating a clean-up campaign. In order for them to have a line of thought, the facilitators will decide and adjust, based on the steps below, how and how much information, guidelines or hits they will give to the groups.

The goal for each group is to go through the processes of a campaign, before, during and after, and write down their conclusions. In the end, each one presents their results, in the way they would prefer, and the facilitators will assist (can use the steps below as a guide) in an open discussion to summarise the most important aspects of each step of a clean-up campaign.

The possible steps for creating a clean-up campaign:

1) ***Research:*** Search for an area with a trash problem that has trash bins close by. Avoid busy places;
2) ***Planning:*** Take into consideration season, time and date. You may want to pick a day depending on working hours. In most situations, weekends are preferable because people have more time;
3) ***Safety:*** Consider the accessibility of the place, weather conditions, and possible hazards;
4) ***Equipment:*** Make a list of the things that you are going to need (gloves, plastic bags, trash pickers, casual clothes, closed shoes, a hat and sunscreen, first AID, water, etc.). Consider if you can provide equipment to the volunteers, and if so, which and how many. If not, you may want to let them know what they need to bring with them;
5) ***Disclosure:*** Which online tools (for example Canva) can be used to create a poster with all the information about the upcoming campaign (where, when, etc.). Which online platform to use, and how? For Facebook, it's better to create an event and for Instagram, a reminder post, because it will notify the people of the upcoming campaign;
6) ***Implementation:*** The performance of the campaign itself considering all the aspects above. Is everyone aware of what is going to happen? And how? Is everyone properly equipped? Where can we leave the collected trash?
7) ***Dissemination (Photos & Videos):*** Think about how and who will be in charge of taking photos and videos. It might be important to consider human rights and ask permission to be in photos. Consider how the data can help to spread a message. For example, taking photos and videos before and after the campaign, especially with the impressive result, is very effective and impactful to share on Social Media Platforms.
8) ***Spread the results:*** For example, connecting with a local newspaper, arranging an interview to talk about the experience and, most importantly, why you are doing all this.

The time needed for the whole activity:

- 5 minutes of briefing
- 20 minutes of brainstorming

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- 10 minutes of presentation
- 10 minutes of debriefing.

Possible questions for debriefing:

1. How did the activity go?
2. What worked well in the discussion process? And what could be improved?
3. Was everyone able to share their opinions?
4. What did you learn from it?
5. What did you like? And dislike?
6. Do you feel ready to create our own campaign?

Activity 2: Clean-up Campaign

In this activity, participants will have the opportunity to participate in a clean-up campaign. The goals are that participants understand how a campaign is implemented and realise its impact, and feel motivated to become active and develop/support initiatives that help the environment.
The facilitators will be in charge of selecting the place, preparing the activity, and ensuring safety throughout the session.

The time needed for the whole activity:

- 5 minutes of briefing
- 30 minutes of clean-up
- 15 minutes for trash collection and separation
- 10 minutes of debriefing, and closing.

Possible questions for debriefing:

1. How was the experience for you?
2. How did you feel?
3. What did go well in the cleanup? And what did not?
4. Can you see the differences in the surroundings?
5. What did you learn from the activity?
6. What are the main takeaways for you from this activity?
7. What will you do differently from now on?

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2. NGOs' climate action

2.1. Short description

The second topic of this module is focusing on the work Non-Governmental Organisations have been developing for the environment. Then, the main goal of this topic is to demonstrate the vital impact these Organisations have around the world in fighting climate action and preserving and protecting important natural areas and under-threat species. And on the other hand, their role in raising awareness and educating people and institutions on environmental protection.

Learning Goals:

a) Main Objectives:

- To demonstrate the vital role of NGOs in environmental and biodiversity protection and climate action;
- To identify the main NGOs at the International, European and National levels.

b) Knowledge:

- To learn what NGOs are;
- To understand the difference between NGOs and Governmental Entities;
- To know how NGOs act fighting climate action;
- To learn the main fields of action.

c) Skills:

- To identify NGOs;
- To be able to inform people about some NGOs and their role;
- To understand how to support an NGO.

d) Attitude:

- To feel ready to support and/or become involved in an NGO.

2.2. Definitions

Biodiversity - it's the term that describes the variety of living species on Earth, including all different groups of animals such as animals, plants, bacteria, and fungi.

Carbon emissions - Carbon emissions mean the release of gases into the atmosphere, contributing to the greenhouse effect. Carbon emissions are commonly associated with Carbon Dioxide, CO2, emissions which is an anthropogenic (produced by human activities) greenhouse gas that results from the use of fossil fuels and from deforestation.

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Climate Change - a term used to describe the long-term alterations in temperature and weather patterns on Earth. These changes may be natural, but human activities have been the main driver of climate change, mainly because of the burning of fossil fuels (coal, oil, and gas).

Deforestation - the process of cutting down or burning trees beyond the ability of the forest to restore itself. The main reasons for deforestation are agricultural expansion, wood extraction, and infrastructure expansion, such as roads and urbanisation.

Ghost gear - the term used for abandoned fishing gear, like nets, traps, and pots, in the marine environment. As it is left behind, this gear continues to capture accidentally animals, potentially killing marine life and degrading habitats. The "ghost gear" is currently one of the main human waste impacting the marine environment.

Global warming - the gradual long-term heating process on the Planet Earth. Global warming is the cause of climate change. This phenomenon has been increasing due to human activities such as fossil fuel burning, which increases heat-trapping greenhouse gas levels in Earth's atmosphere.

Greenhouse effect - The greenhouse effect is a natural phenomenon resulting from the release of greenhouse gases (GHGs) into the atmosphere. The most common GHG is water vapour. Without the greenhouse effect, the planet would be colder and life as we know it would not be possible. But CO2 and other GHGs related to human activities amplify the greenhouse effect and unbalance the climate.

Greenhouse gas - Greenhouse gases are the gases in the Earth's atmosphere that produce the greenhouse effect. Most greenhouse gases can have either a natural or an anthropogenic (man-made) source. Additional gases (carbon dioxide, methane, nitrous oxide, etc.) related to human activities, such as generating electricity and heat, agriculture, transportation, forestry, and manufacturing, amplify the greenhouse effect and unbalance the climate of the planet.

Microplastics - smaller plastic particles that result from the degradation of plastic waste, normally made by natural elements and processes like sunlight, wind, or wave action. Microplastics are spread throughout the water column and have been found in every corner of the globe.

NGO (Non-Governmental Organisations) - an entity, typically nonprofit, that is independent of any government. These organisations can work on social, political, ethnic, environmental or other areas or issues. They often rely on voluntary work.

Pollution - the process of introducing harmful materials into the environment. These materials - the pollutants - are responsible for changes in the quality of air, water, and land. They can be natural, such as volcanic ash, however, they are mostly created by human activities, like runoff of factories or burning of fossil fuels.

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Plastic pollution - also known as plastic waste is the accumulation of plastic objects in the planet's environments, that modifies habitats and affects wildlife, and, ultimately, humans.

Activity 3: Let's Quiz it!

Participants are given a short quiz about some of the main environmental problems. They are invited to answer it by themselves during the following 15 minutes. Then, the facilitators gather the group in a big circle and go through the questions inviting the participants to discuss the answers and possible comments/thoughts within the group.
Next, the participants are divided into groups of 3-4 people. Their task is to discuss within their groups NGOs they know (international, national, or in their community) that work in combating climate change. The participants return to the main group and are encouraged to share some of the NGOs they discussed. The activity ends with a debriefing section.

The time needed:

- 10 minutes of introduction and briefing
- 15 minutes for the quiz
- 15 minutes for open discussion about the answers
- 15 minutes for discussion within small groups about NGOs
- 15 minutes to highlight some of the NGOs that came up from the discussion
- 10 minutes for debriefing

Possible questions for debriefing:

1. How did the activity go?
2. What did you learn from it?
3. Which terms/definitions were new to you?
4. Do you feel more aware of the role of NGOs in climate action?
5. Did you find out about new NGOs? Are they in your country/community?
6. Would you be able to tell a friend of yours about one of the organisations you talked about today?

Answers and information related to the quiz questions

https://docs.google.com/document/d/1A0sscbR30DzeTGfkdFkgixmfOQ6Dd82tQFcaBt0mtnA/edit

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Additional Resources

The following resources may add value to the activity.

- Plastic Pollution – Earth Day 2019: https://www.youtube.com/watch?v=XD-k_Tkw3lY
- Plastic Pollution WWF - https://www.youtube.com/watch?v=IA9O9YUbQew
- Whale's Tale (animation without words) - https://www.youtube.com/watch?v=xFPoIU5iiYQ
- What is Deforestation? - https://www.youtube.com/watch?v=vJnnrpSDWPI
- Why is biodiversity important - https://www.youtube.com/watch?v=GlWNuzrqe7U
- Biodiversity Loss - https://www.youtube.com/watch?v=dbCR0KSU52g

3. Community environmental awareness

3.1. Short description

In this topic, the goal is to emphasise the importance of developing public environmental awareness, as an important factor in increasing enthusiasm, motivation and support, stimulating self-mobilisation and action, and mobilising knowledge and resources within communities. The growth and development of awareness, understanding and consciousness toward the environment and its problems, including human interactions and effects, is crucial to changing the direction of the actual paradigm of consumption and use of natural resources. Finally, attention will also be directed to ways of raising public awareness.

Learning Goals:

a) Main Objectives:

- To emphasise the importance of developing public environmental awareness;
- To learn how to mobilise knowledge and resources within communities.

b) Knowledge:

- To learn how to educate people on environmental topics;
- To learn how to mobilise knowledge and resources within communities;
- To know ways of raising public awareness.

c) Skills:

- To understand the importance of public environmental awareness;
- To be able to use some of the knowledge and spread the word.

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d) Attitude:

- To feel motivated to share the knowledge with the community.

Activity 4: Communicating for Change

Participants are given a lecture about communication actions. Then they are separated into small groups where they will be asked to create a communication action that raises environmental awareness in the community, this will go on for 25 minutes. Then, the facilitators gather the group in a big circle and invite each small group to present their communication activities, which will go on for 15 minutes. Finally, there are 15 minutes to discuss the challenges of implementing said communication actions. The activity ends with a debriefing section.

The time needed:

- 5 minutes for introduction
- 5 minutes for energiser
- 20 minutes for a lecture about communication actions
- 20 minutes for small group work
- 15 minutes for the presentation of results
- 5 minutes for break
- 15 minutes for group discussion
- 10 minutes for reflection and feedback

Possible questions for debriefing

1. How did the activity go?
2. What did you learn from it?
3. Which terms/definitions were new to you?
4. Do you feel more aware of the role of communication in climate action?
5. Do you feel motivated to implement it?

Additional Resources

The following resources may add value to the activity:

- Climate talk and science solutions: https://www.youtube.com/watch?v=V-tEmE85QDE
- What's missing from great science? Great storytelling.https://www.youtube.com/watch?v=cvg3IfrusP8

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- The Power of Communication in Affecting Environmental Impact https://www.youtube.com/watch?v=HSeblD00Jnc

4. Fundraising and Sponsorship

4.1. Short description

The aim of this topic is to bring attention to methods of supporting NGOs activities or any other project and show the importance of sponsorship in environmental action. In order to achieve that it is crucial to educate people on the concepts involved and understand how and where to find and involve sponsors in environmental activities or projects.

Learning Goals:

a) Main Objectives:

- To discover methods of funding NGOs activities through public and private entities;
- To stimulate communication skills;
- To stimulate empathy and understanding;
- To motivate people to become active agents for the environment;
- To educate people about the subject;
- To stimulate active citizenship.

b) Knowledge:

- To understand the importance of Sponsorship regarding environmental action;
- To understand the needs of the activity and how to split the budget accordingly;
- To know where and how to find sponsors;

c) Skills:

- To stimulate communication skills;
- To stimulate empathy and understanding;
- To manage a fixed budget according to the needs of an activity;

d) Attitude:

- To motivate people to become active agents for the environment;
- To encourage fundraising campaigns;
- To stimulate active citizenship.

4.2. Definitions

Sponsorship: Sponsoring something is financially supporting an event, activity, person, or organisation or providing products or services. The individual or group that offers the support,

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similar to a benefactor, is known as the sponsor.

Fund: Funding is providing money or other resources to finance a specific purpose, program, or project.

Activity 5: An action for CHANGE

Participants are given a lecture about sponsorship and funding for climate change action. Then they are separated into small groups where they will be asked to create a climate action with a fixed budget and research of sponsors, which will go on for 25 minutes. Then, the facilitators gather the group in a big circle and invite each small group to present their communication activities, which will go on for 15 minutes. The activity ends with a debriefing section.

The time needed:

- 5 minutes for introduction
- 20 minutes for a lecture about sponsorship and funding climate actions
- 20 minutes for small group work
- 15 minutes for the presentation of results
- 10 minutes for reflection and feedback

Possible questions for debriefing

1. How did the activity go?
2. What did you learn from it?
3. Which terms/definitions were new to you?
4. Do you feel more aware of the role of sponsorship and funding in climate action?
5. Do you feel motivated to implement it?

5. Corporate Social Responsibility

5.1. Short description:

This topic is related to Corporate Social Responsibility. Here, we will decode this term and understand its importance at the corporate level of different entities and their interactions. The focus will also be on the principles of corporate social responsibility, including sustainability, responsibility and resources, and on demonstrating how entities can perform exemplary in this subject.

Learning Goals:

a) Main Objectives:
   - To decode the term Corporate Social Responsibility and understand its importance and role at the cooperative level of different entities;
   - Have a deeper understanding of how corporations can take social responsibility into action.

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b) Knowledge:
- To learn what Corporate Social Responsibility is;
- Understand the different types of CSR;
- To understand its importance and role in green movements;
- To learn about its principles;
- To know ways in which entities can perform exemplary;
- To learn about the benefits of CSR initiatives for companies and employees.

c) Skills:
- To have a clear understanding of what CSR is;
- To Identify sustainability opportunities in business operations;
- To have a critical mindset regarding action plans on traditional corporations;
- To communicate effectively on CSR.

d) Attitude:
- Action-based thinking on CSR possible practices;
- Take decisions based on community interest;
- Plan actions taking into consideration of Moral Principles, Human Rights, Legal and Ethics;
- Being able to have a social impact.

5.2. Definitions

Corporate Social Responsibility is based on changing behaviour or specific actions that companies decide to take to please their public, which can be internal or external. This should be taken only by the company's choice and not caused by external influences.
In other words, the company gives back to its community by positively impacting the environment and with gestures of goodwill without letting profits come first.
However, the strategies that companies put in place must ensure that the company's operations are ethical and beneficial to society.

5.3. Types of Corporate Social Responsibility

a. Environmental Responsibility

For corporate social responsibility, **ecological commitment** is essential. Companies today contribute significantly to the emission of pollutant gases, pollution, and waste, among others, and therefore they have the responsibility to implement practices that can somehow offset their ecological footprint.

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Actions on the same environmental responsibility can take different forms depending on the type of business, size and industry. Still, they can range from environmentally friendly materials to renewable energy. Some actions can also include volunteer actions to clean up litter, among company employees, either in forests, streets, or beaches, or donating funds to programs and organisations that combat these same issues.

b. Ethical Responsibility

To be ethically responsible at the corporate level is to ensure that the practices adopted in the organisation, about its employees, stakeholders and customers, and the business environment, are done ethically and with respect.

This type of social responsibility includes internal and external policies that ensure that people are treated with respect and receive benefits in the workplace, such as ensuring a higher minimum wage, that company materials are obtained from an ethical source, that employees receive equal pay and other benefits that employees deserve for their work.

c. Philanthropic Responsibility

When businesses and companies donate to their community, whether through causes or donations that align with their mission, they follow their philanthropic responsibility.

Actions of philanthropic responsibility can range from as small-scale as a company helping a non-profit organisation to as large-scale as donating perceptions of the company's annual profits to a cause that is aligned with the company's mission.

d. Economic Responsibility

As far as economic responsibility is concerned, in financial decision-making, the prioritisation of doing good, rather than just making money, is taken into consideration, and it is for this reason that this type of corporate social responsibility is linked with the other types mentioned above.

This may mean that the company considers the destination of its actions when making decisions. For example, when signing a contract, the company may choose a supplier that uses sustainable materials even if the purchase cost is higher. The transparency of salaries in a system that compensates all its employees and promotes gender equality and a less gender-dispersed salary structure is an example of economic responsibility as well.

5.4. The Benefits of Corporate Social Responsibility

The benefits that CSR can bring are improved labour relations and well-being that positively impact employees and their environment (both in the company and the natural world). This will make employees feel more motivated and committed to the company, which in turn will lead to an increase in productivity.

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In a way, this can contribute to companies retaining more talent within the organisation and, in this way, investing in the development of their employees, which can represent a win-win situation for both the company and the employees.

When a business commits to social responsibility through its initiatives, it contributes to a more sustainable world that treats its employees well, is committed to equal pay, and is more ethical.

Activity 6: Study Visit to a Corporation with CSR initiatives

This will be implemented using the non-classroom method. The activity should be decided by a professor or Youth Worker who needs to plan for the Study Visit.
The students will learn, before the visit (or even in the first part of the visit in a meeting room, e.g.), the CSR initiatives of the organisation they will visit in order to think about suggestions for improvements and new ideas for the CSR Department they are visiting. After, they will have a moment with company staff to sketch ideas or tips for their initiatives. This activity is designed to last at least 200 minutes.

The time needed:

- Introduction upon the visit (30min);
    - Clarifying briefly what CSR is (Professor or Youth Worker); (5m)
    - Watch a video of a CSR practice example (10 min)
    - Presentation to the students about the CSR Initiative implemented/developed by the organisation they will visit; (15m)
- During the visit: (110m)
    - Visit to the CSR department of the organisation and get to know the initiatives; (70m)
    - Break; (10m)
    - Participants are invited to present their suggestions of improvement of current CSR initiatives of the organisation visiting and give other ideas to the e CSR department responsible; (30m)
- Debriefing about the visit. (10min)

Possible questions for debriefing:

1. What CSR action did you identify that employees join the most?
2. Do you think all medium/big companies should have CSR departments? If yes, why?
3. What CSR practices do you find that please you the most?
4. Did you find any cases of Corporate Social Responsibility that should have been in place/were missing? Can you specify the case?

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Additional Resources:

To get to know more about Corporate Social Responsibility and brands that are successfully implementing their initiatives, you can also take a look at these websites:

- https://digitalmarketinginstitute.com/blog/corporate-16-brands-doing-corporate-social-responsibility-successfully
- https://prowly.com/magazine/corporate-social-responsibility-examples/

6. Examples of good practices

6.1. Short description:

The final topic of module 4 is dedicated to the good practices, and inspiring examples carried out on personal, local, national, European or International levels on the different topics above, aiming to motivate and inspire people to be part of the change and fight for the future of life on the planet.

Learning Goals:

a) Main Objectives:
   - To show examples of good individual practices;
   - To show examples of inspiring volunteering movements;
   - To show examples of vital organisations in the green movement.

b) Knowledge:
   - To understand what good practices are;
   - To recognise a good example;
   - To understand the importance of these good practices and initiatives.

c) Skills:
   - To identify a good practice;
   - To find out about good practice;
   - To implement good practices;
   - To contribute/create an inspiring movement for the planet.

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d) Attitude:
   - To feel inspired and motivated to become an active agent for the environment;
   - To feel ready to implement and/or contribute to good practice.

6.2. Examples of good practices

1) **Community Initiative and action**

a) **Projeto Gea**

A volunteering movement created by a couple in Faro in 2019 that develops weekly clean-up campaigns in neighbourhoods, parks and natural areas. Since then, they have implemented more than 75 campaigns directly involving more than 100 people in Portugal and Greece.
Their main goal is to raise awareness of the problem of human pollution while showing that small and individual actions can also have a great positive impact on the environment.

b) **The Trash Traveler**

The Trash Traveler is a project that was created by a German guy in Portugal that wants to raise awareness for human pollution with some fun and creativity. So far, he has done three great events in Portugal:

- ➔ The Plastic Hike - a hike, in 2020, of 832 km along the entire coastline of Portugal in 58 days to raise awareness about plastic pollution, where 1,6 tons of plastic were collected together with more than 100 NGOs.
- ➔ The Butt Hike - a city Clean Up Tour in 2021 throughout the coast of Portugal that collected 1,1 million cigarette butts within two months with a community of 600 people and 70 initiatives.
- ➔ The Trash Circle - a 2370 km long Circle around Portugal within 55 days on a second-hand bicycle to spread awareness on the consumption of plastic bottles and trash production in general.

2) **NGOs' Climate Action**

a) **Brigada do Mar**

Brigada do Mar is a Portuguese NGDO (Non-Governmental Organisation for Development). It was formally established in 2012, although it has been operating since 2008. The association's primary goal is the decontamination of the coastline.

AREAS OF ACTION

- ➔ Decontamination - Clean beaches in a regular and structured way with motivated teams, visionary companies and schools oriented to learn how to take care of a precious value. The decontamination actions fall into two categories, large volumes (greater than 1.5 L bottle of water) and all sorts of items that are not part of the ecosystem.

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- ➔ Environmental education (OCEANIZAR) - Empower students and teachers to protect the oceans through beach cleaning actions, lectures and workshops.
- ➔ Eco team buildings (CORPOR-ACT) - Involve companies and institutions in the mission to educate and alert them to ecosystems' fragility.
- ➔ Development cooperation - This area aims to create a network for transmitting knowledge and good practices with the various actors in the area of sustainability and the blue economy.

3) Community Environmental Awareness

a) Blue School (Escola Azul)

Escola Azul - Blue School is an educational programme of the Portuguese Ministry of Economy and Maritime Affairs. Its main goal is to improve Ocean Literacy in schools, creating responsible and active generations that contribute to the Ocean's sustainability. The initiative aims to integrate the local community into the programme's actions and interact with the Blue School partners' network.

4) Sponsorship

a) Vodafone Portuguese Foundation - Programme Bandeira Azul (Blue Flag)

Vodafone Portugal is one of the main sponsors of the Portuguese Programme Bandeira Azul (Blue Flag). The Blue Flag Programme is an education programme for sustainable development, promoted in Portugal by the European Blue Flag Association, the Portuguese section of the Foundation for Environmental Education.

The Educational Programme aims to raise awareness and concern for the coastal, lake and river environment of those who live in it or use it for recreation. It also promotes training in environmental matters for staff and tourism service providers and encourages the participation of local agents in the management of those areas while promoting the sustainable use of the area for recreation and tourism.

b) Lidl Portugal - TransforMar

In partnership with the Blue Flag, Lidl Portugal develops for the 5th year the project TransforMar throughout the beaches in Portugal. The initiative promotes the circular economy by recycling collected plastic and metal or reusing and processing them, as well as the removal of plastic and other marine litter from beaches while raising awareness among the Portuguese people to adopt more sustainable environmental behaviours.

5) Corporate Social Responsibility

a) Delta Cafes

Delta is a coffee brand founded in the 1970s by Manuel Rui Azinhais Nabeiro, that has always been looking into ways to differentiate itself from its competitors. Therefore, it soon developed a social responsibility strategy that incorporates the stakeholders' needs, bringing about the

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Human Face system characterised by dialogue, responsible entrepreneurship and disruptive innovation.

Delta deposited 2000 pieces of machinery in recycling containers due to their efforts to raise consumer awareness. This initiative reached 22 cities in Portugal, and the financial profit has been reinvested into a tree-planting project in Portalegre, the district where its Headquarters are located.

Activity 7: Presentation of good practices

Participants are given a short presentation with some examples of good practices in the different topics of the module. Start a small presentation based on the information given in this handbook about some of the inspiring examples, using the additional videos suggested. The activity should finish with an open discussion about the presentation and videos and a debriefing section.

The time needed:

- 10 minutes for an introduction to the activity
- 45 minutes for watching the presentation and videos
- 15 minutes for an open discussion
- 10 minutes for debriefing

Video - Brigada do Mar's Clean-up with a School

https://mega.nz/file/toJTDKSJ#RY3kTapQdw0FL2qNYW8TiSNeTipmr9G-0qXpjul5mL4

Video - Blue School Programme

https://youtu.be/u13IurTOrYA

Possible questions for debriefing

1. How was the activity for you?
2. How did it make you feel?
3. Did you learn something from it?
4. What did impress you the most?
5. Are you inspired/motivated to become more active in protecting the environment?
6. Do you see yourself involved in or supporting any movement or NGO?

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References

Topic 1:

1. https://www.instagram.com/projetogea/

Topic 2:

2. https://www.nationalgeographic.org/society/
3. https://www.rainforest-alliance.org/issues/forests/
4. https://www.worldwildlife.org/initiatives/
5. https://www.undp.org/sustainable-development-goals#
6. https://oceanservice.noaa.gov/facts/ghostfishing.html#
7. https://www.myclimate.org/information/faq/faq-detail/what-are-greenhouse-gases/

Topic 4:

8. http://www.runforoneplanet.org/sponsors.php
9. https://www.thefreedictionary.com/funding

Topic 5:

10. https://drive.google.com/file/d/1DC2vyS46Ax85mAlqst-awaXbC8PyFbF-/view?usp=sharing
11. https://www.pacificoaks.edu/voices/business/breaking-down-the-4-types-of-corporate-social-responsibility/

Topic 6:

12. https://www.instagram.com/projetogea/
13. https://theplastichike.org/
14. https://www.facebook.com/thetrashtraveler1/
15. https://www.facebook.com/brigadadomar
16. https://escolaazul.pt/en/escola-azul/o-que-e
17. https://www.deltacafes.com/en/sustainability/social-responsibility
18. https://bandeiraazul.abae.pt/
19. https://www.vodafone.com/sustainable-business/our-contribution-to-un-sdgs
20. https://institucional.lidl.pt/sustentabilidade/medidas/subitems/paginas-medidas/transformar

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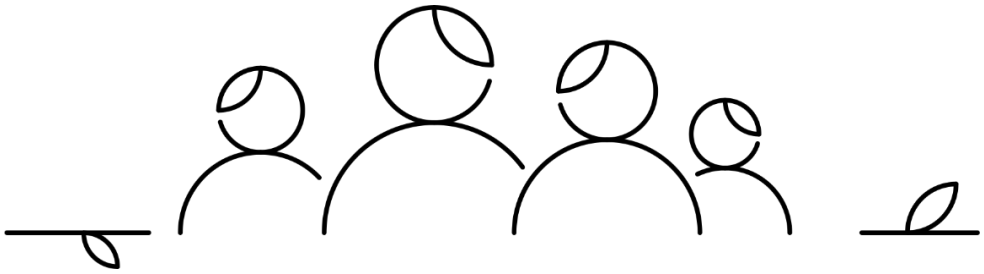

HANDBOOK FOR YOUTH WORKERS

Project number: 2020-3-RO01-KA205-094853

MODULE 5: European Union and National Environmental Policies

Tavo Europa

greenACT

Co-funded by the Erasmus+ Programme of the European Union

Project Information

PROJECT: greenACT

PROJECT TITLE: Youth 'agents of change' on Climate Action and Environmental Sustainability

ACRONYM: greenACT

PROJECT WEBSITE: https://greenactproject.eu/

PROJECT NO.: 2020-3-RO01-KA205-094853

PROJECT COORDINATOR: ASOCIATIA D.G.T

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greenACT

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Contents

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Key Symbols

Symbols	*Explanation*
	Definitions
	Case study
	Additional Resources
	Tips
	Activities
	Reminder
	Video

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General Objective of the Module

This module will provide a basic understanding of environmental policies at the European Union and national level. Environmental protection policies, legal frameworks, and good practices will be presented, demonstrating the efforts of governments and societies to achieve effective environmental protection and current challenges. The provided information will be useful for active environmental action.

Topics:

1. Environmental protection policies.
2. Environmental governance
3. Environmental laws, policies and legislations
4. European international environmental agreements and goals
5. Examples of good practices

Learning Goals

1. To present a policy framework at the national and international levels.
2. To increase individuals' awareness of environmental governance and environmental legislation aims and objectives.
3. To encourage the implementation of various environmental protection initiatives in accordance with national and EU legislation and the main legal instruments.
4. To provide knowledge about essential international environmental agreements and goals, including the Green Deal and Sustainable Development Goals.
5. To introduce good practices in the field of environmental protection and to encourage citizens' involvement in them.

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European Union and National Environmental Policies

1. Environmental protection policies

Environmental protection is the practice of protecting the natural environment by individuals, organizations and governments. Its objectives are to conserve natural resources and the existing natural environment and, where possible, to repair damage and reverse trends.

The countries of the European Union have agreed to jointly achieve the following goals:

- To protect, maintain and nurture the EU's natural capital,
- To make the EU economy a green and competitive, resource-efficient and low-carbon economy,
- To protect EU citizens from negative environmental impacts and risks to health and well-being.

Tools and procedures to achieve the objectives:

1) environment action programms (8th EAP),
2) horizontal strategies (Sustainable Development Strategy (SDS), Biodiversity Strategy for 2030, Farm to Fork Strategy),
3) international environmental cooperation (2030 Agenda for Sustainable Development, the Paris Agreement on Climate Change and the Sendai Framework for Disaster Risk Reduction, the Convention on International Trade in Endangered Species (CITES),
4) environmental impact assessment and public participation (environmental impact assessment – EIA, strategic environmental assessment – SEA),
5) tools for implementation, enforcement, and monitoring (The European Union Network for the Implementation and Enforcement of Environmental Law – IMPEL, Environmental Implementation Review, the European Environment Agency – EEA, the European Earth Observation Programme – Copernicus, etc.).

Q&A on environmental protection and climate policy - EU explained
https://www.youtube.com/watch?v=0qcnzKTSQ50

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Each member country of the European Union must comply with common agreements, but the implementation of decisions in each country is accompanied by various circumstances and its own challenges. The most important thing is to realize that the citizens of those countries are also responsible for the decisions made by the states and their implementation.

Explore your area! Environment reflections

Participants are divided into groups of 3-4 people. The goal is to identify a noticeable problem related to environmental protection after assessing the immediate environment and propose possible solutions. 30 minutes are devoted to monitoring the environment and 30 minutes to a group discussion, considering solutions and possibilities at both the highest (European Union) and the lowest (citizen) level.

Debriefing questions:

1. What environmental violations do I notice around me?
2. Who owns the territory and who is legally responsible for its maintenance?
3. Which institutions in my country are responsible for environmental protection?
4. How can I contribute to changing the situation?
5. What could be done in general to change the situation both in my country and in the EU?
6. What could be the main obstacles preventing the situation from changing?

2. Environmental governance

Environmental governance includes policy, rules and norms that govern human behavior and it also addresses who makes decisions, how decisions are made and carried out, the scientific information needed for decision-making and how the public and major stakeholders can participate in the decision-making.

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The European Commission is creating an evaluation framework for environmental governance that addresses five factors: responsibility and compliance assurance, participation and openness, access to justice, and effectiveness and efficiency. In June 2019, the findings of a study project that outlines a starting methodology and gathers data for all EU Member States were released. The EU nations and the Commission will now collaborate to further enhance this evaluation system.

The effectiveness with which nations can implement environmental legislation and policy depends critically on the performance of their overall environmental governance. It can be useful to compare environmental governance performance to that of other EU nations in order to generate ideas for how to increase openness and efficiency.

Environmental governance is a target of improvement efforts both domestically and abroad as a crucial aspect of the EU's sustainable development. The Environmental Implementation Review's (EIR) edition was published by the European Commission in February 2017. The Commission has commissioned this preliminary framework for an assessment of environmental governance as it continues to refine its methodology for evaluating environmental implementation based on the EIR.

Development of an assessment framework on environmental governance in the EU Member States, final report, May 2019

https://ec.europa.eu/environment/environmental_governance/pdf/development_assessment_framework_environmental_governance.pdf

Learn about your country in the context of the European Union! Group discussion

Every participant is invited to get acquainted with the Environmental governance report prepared in 2019. The goal is to discover and collect data related to the home country. After all the participants are familiar with the presented data; there is a discussion about how the country looks in the context of the European Union, what might have changed in the last few years, and what are the biggest challenges that still await in the future.

Debriefing questions:

1. What environmental governance actions do I notice in my daily life?
2. How do member states coordinate their actions with the EU in order to achieve adequate environmental protection?
3. How does my country look in the general context?

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4. What environmental protection challenges seem to be the most important?
5. What breakthroughs have already been achieved or can be achieved in the near future in my country?

3. Environmental laws, policies, and legislations

The Single European Act of 1987 introduced a new 'Environment Title', which provided the first legal basis for a common environment policy with the aims of preserving the quality of the environment, protecting human health, and ensuring rational use of natural resources.

Since the early 1970s, the EU's environmental policy has been developed through environmental action programs:

- 1st – Programme of Action of the European Communities on the Environment (1973-1976)
- 2nd – European Community Action Programme on the Environment (1977-1981)
- 3rd – Action Programme of the European Communities on the Environment (1982-1986)
- 4th – EEC Fourth Environmental Action Programme (1987-1992)
- 5th – Community programme of policy and action in relation to the environment and sustainable development (1993-2000)
- 6th – the Sixth Community Environment Action Programme (2002-2012)
- 7th – the Seventh Environment Action Programme (2014-2020)

The 8th Environment Action Programme till 2030:

- The declaration backs the European Green Deal's environmental and climate change goals. It presents an opportunity for the EU as a whole to reaffirm our dedication to the 7th EAP's 2050 vision: we aim to assure everyone's well-being while respecting the limits of the earth..
- The 8th EAP calls for the active involvement of all stakeholders at all levels of government to ensure the effective implementation of EU climate and environmental legislation. This forms the basis for the EU to implement the UN's 2030 Agenda and its Sustainable Development Goals.

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- The 8th EAP aims to accelerate the transition to a carbon-neutral, resource-efficient, regenerative economy that gives back to the planet more than it needs to. We recognize that human well-being and prosperity depend on the healthy ecosystems in which we operate.

EU legislation in force concerning the environment:

- Nature and biodiversity.
- Integrated pollution control.
- Air pollution.
- Water pollution.
- Noise pollution.
- Environmental impact assessment.
- Genetically modified organisms.

Many of the EU laws protecting the environment are highly technical and set detailed technical and scientific standards. Legislation requiring Member States to provide the European Commission with information on how they have implemented regulations and how effective they have been is also common.

Environmental Regulatory Framework – Legislation:

EU legislation on environmental issues covers a vast landscape of different subjects that have been enacted over decades. The main rules for protecting the environment are laid down by a combination of directly applicable regulations in Member States and directives that set the framework for the relevant fields, which are then transposed by Member States into national legislation (Given the Member States (the flexibility of the country to implement the framework in a way that suits their national circumstances). The European Commission has also adopted a number of delegated acts containing more detailed implementing rules and guidelines.

Major environmental regulations and important related laws include:

- Integrated Pollution Prevention and Control (IPPC): Industrial Emissions Directive (IED) (2010/75/EU).
- An air quality framework that sets air quality targets and controls air emissions from sources: Air Quality Directive (2008/50/EC) and various associated Directives.

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- A water framework aimed at managing water resources, improving water quality, preventing water pollution, and protecting the aquatic environment in general: Water Framework Directive (2000/60/EC) and various related Directives, and the IED.
- A waste framework to reduce waste, properly manage waste including hazardous waste, and control waste shipments: Waste Framework Directive (2008/98/EC).

Other key regimes include:

- Environmental impact assessment (EIA): Environmental Impact Assessment Directive (2011/92/EU).
- Nature and biodiversity protection: Birds Directive (2009/147/EC) and Habitats Directive (92/43/EEC).
- Environmental liability for environmental damage: Environmental Liability Directive (2004/35/EC).
- Energy and climate framework:
- the Effort Sharing legislation (which forms part of a set of policies and measures on climate change and energy) (Effort Sharing Decision (406/2009/EC) and Effort Sharing Regulation ((EU) 2018/842);
- Emissions Trading Directive (2003/87/EC);
- Renewable Energy Directive (2009/28/EC) and (Renewable Energy Directive II) (RED II) ((EU) 2018/2001) (together, the Renewable Energy Directives);
- Energy Efficiency Directive (2012/27/EU).

Regulatory Authorities

In general, Member State institutions act as regulatory authorities in matters falling under EU law. However, EU institutions play a regulatory role in some respects with respect to various centralized EU environmental regulations. For example:

European Chemicals Agency and European Commission in relation to the regulation of chemicals and biocides.

Financial support for environmental projects:

LIFE 2014-2020 is an EU co-funded program aimed at contributing to the development, implementation and updating of EU environmental policy and legislation. LIFE also promotes the integration of the environment into other policies and aims to achieve sustainable development in the EU. LIFE Regulation 2014-2020 came into force in December 2013.

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It has two sub-programs: Environment and Climate action. The environmental subprogram includes environmental protection and resource efficiency. nature and biodiversity; environmental management and information; Climate action includes climate protection. Adaptation to Climate Change; Climate Management and Information.

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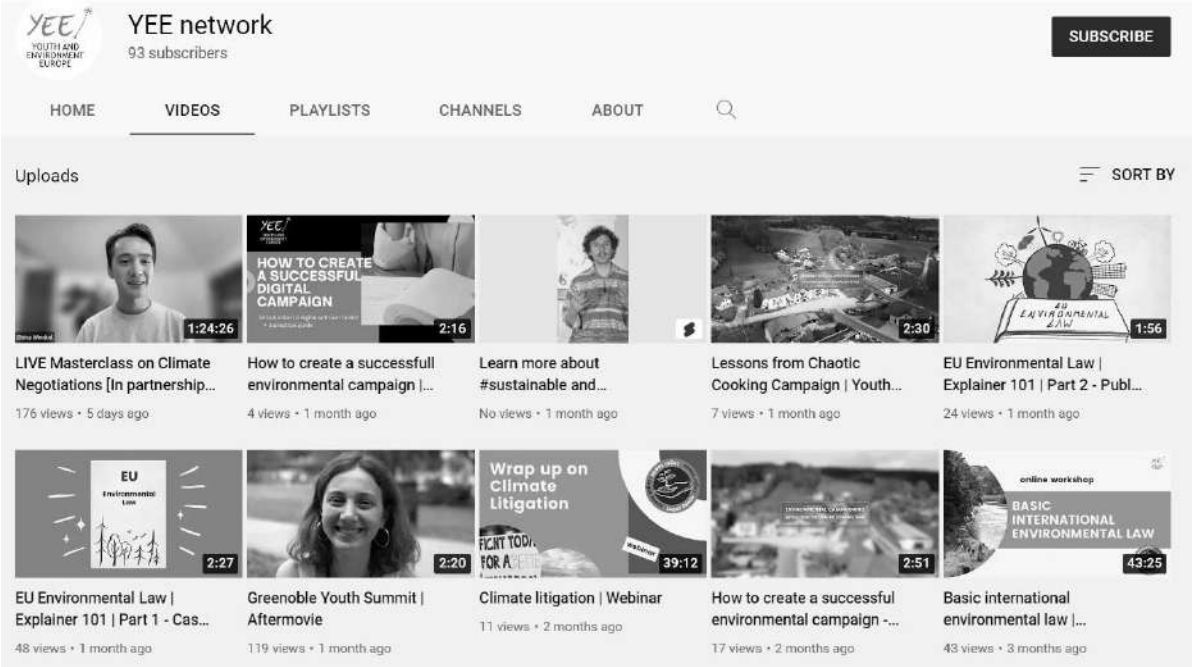
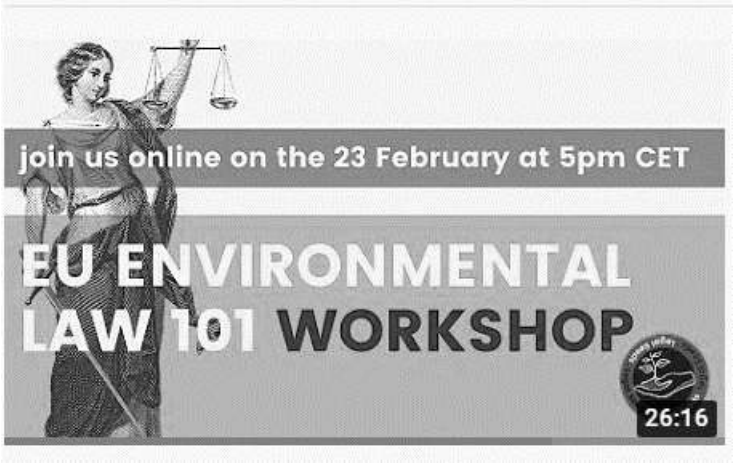
Youth and Environment Europe – YouTube channel



Attend an online workshop!

https://www.youtube.com/watch?v=JEcOrdhTiJo

All participants are invited to take part in the workshop, which includes: the basics of EU environmental law, exercises to consolidate the acquired knowledge, application of the EU law and court practice.



Debriefing questions:

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1. Which environmental laws of the European Union are best known?
2. Which environmental laws of the European Union should be presented more widely?
3. How does knowledge of the legal framework change attitudes towards the environment?
4. What punishments for disregarding environmental requirements could be the most effective?
5. Do I know about workshops on the topic of environmental protection taking place in my country?

4. European International Environmental Agreements and Goals

The European Green Deal presents a roadmap for making the EU's economy sustainable by turning climate and environmental challenges into opportunities across all policy areas and making the transition just and inclusive for all. The European Green Deal aims to boost the efficient use of resources by moving to a clean, circular economy and stop climate change, revert biodiversity loss and cut pollution. It outlines investments needed and financing tools available, and explains how to ensure a just and inclusive transition. The European Green Deal covers all sectors of the economy, notably transport, energy, agriculture, buildings, and industries such as steel, cement, ICT, textiles and chemicals.

The Sustainable Development Goals (SDGs), also known as the Global Goals, were adopted by the United Nations in 2015 as a universal call to action to end poverty, protect the planet, and ensure that by 2030 all people enjoy peace and prosperity.

The European Union's Green Deal, Explained
https://www.youtube.com/watch?v=gShVdPOp1D4

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European Green Deal has six priority objectives:

- By 2030, reduce greenhouse gas emissions and achieve the goal of neutralizing the climate by 2050.
- Increase adaptive capacity, enhance resilience and reduce vulnerability to climate change
- Move towards a renewable growth model that decouples economic growth from resource consumption and environmental degradation and accelerates the transition to a circular economy.
- Achieving zero pollution, including air, water and soil, to protect the health and well-being of Europeans.
- Protection, conservation and restoration of biodiversity and enhancement of natural capital (especially air, water, soil, forest, freshwater, wetland and marine ecosystems).
- Reduce the environmental and climate impacts caused by production and consumption (particularly in the areas of energy, industrial development, buildings and infrastructure, mobility and food systems).

Main challenges in implementing The Green Deal:

• Allocation of funds at both the European Union and Member State level.

• Raise private funds for program implementation.

• Global problems in the financial sector.

• Coordination between Member States and society on decisions.

• Acceptance and regulation of various restrictions.

• Find compromises with other continents.

Sustainable Development Goals explained with 3 useful tips | Environment SDG Sustainability

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https://www.youtube.com/watch?v=qfOgdj4Okdw

Top priorities by the United Nations:

- Accelerate progress on the Millennium Development Goals, including reducing mortality and reducing social exclusion.
- Address climate change while promoting mitigation and adaptation actions on the ground, including promoting climate finance and implementing agreements to reduce emissions.
- Strengthen and implement consensus on a post-2015 sustainable development framework. This means mobilizing the UN system to define sustainable development goals for the new generation, support related policies and more.

The main challenges of sustainable development:

• Lack of financing from state budgets and little attraction of private funds.

• Disengagement from countries experiencing armed conflicts and other disturbances.

• Consequences of natural disasters.

• Corruption flourishing in some countries.

• Little involvement of some state structures.

Citizens role in environmental agreements:

• *Pressure on governments.* The support and trust of the public is especially important for state authorities, so significant changes are often achieved when the public demands something.

• *Personal initiative.* While there is a lot of talk in environmental protection about big goals and big players who can shape the future, even small initiatives can eventually become engines of important change.

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• *Allocation of personal funds.* Without the inclination or imagination to initiate something, there is an opportunity to contribute financially to other significant activities organized. It is understood that only a small part of the taxes paid to the state goes to environmental protection, so all kinds of additional support are needed.

• *Contribution to raising more conscious generations.* In the family, education is particularly important, so it is important to develop awareness of nature as a value from an early age.

Debriefing questions:

1. What changes caused by the green deal can be observed in everyday life?
2. Which sustainable development goals seem to be the easiest to achieve and which are the most difficult?
3. How can the state and citizens work together to achieve the set goals?
4. What kind of environment and its protection can be imagined in ten years?
5. How to maintain attention to environmental protection in the face of other global challenges?

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5. Examples of good practices

Find good practices in your area!

There are many examples of good practices in Europe that show the conscious and responsible behavior of governments and society towards nature. However, we do not always recognize these practices and are aware of them. A visit to a local institution or to the organizers of various initiatives will significantly broaden understanding and encourage involvement in meaningful activities.

Debriefing questions:

1. Is the activity of this institution/initiative widely known in my environment?
2. Which goals of the institution/initiative are considered short-term and which long-term?
3. What resources are most lacking to achieve the goals?
4. How can you personally contribute to the ongoing activities?
5. Does the activity of this institution/initiative have analogues in other countries?

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References

1. *Autodesk | Meet the net zero heroes*. (n.d.). Retrieved July 4, 2022, from https://www.autodesk.eu/industry/accelerate-sustainability?mktvar002=5030647%7CSEM%7C%7Bcampaignid%7D%7C%7Badgroupid%7D%7C%7BTargetId%7D&ef_id=CjwKCAjwoduRBhA4EiwACL5RP0bcOnqYtiLIO_XXkO4mbh_W70pPo00ctg10csgpY2aTVA8qybqsLxoC_hkQAvD_BwE:G:s&s_kwcid=AL!11172!3!564217852012!p!!g!!environment!12463058871!125005697450&gclid=CjwKCAjwoduRBhA4EiwACL5RP0bcOnqYtiLIO_XXkO4mbh_W70pPo00ctg10csgpY2aTVA8qybqsLxoC_hkQAvD_BwE
2. *Best environmental management practice*. (n.d.). Retrieved July 4, 2022, from https://joint-research-centre.ec.europa.eu/scientific-activities-z/best-environmental-management-practice_en
3. *Citizens Information*. (n.d.). Retrieved July 4, 2022, from https://www.citizensinformation.ie/en/
4. *EC directives and legislation | Scottish Environment Protection Agency (SEPA)*. (n.d.). Retrieved July 4, 2022, from https://www.sepa.org.uk/regulations/how-we-regulate/ec-directives-and-legislation/
5. *Environment policy: general principles and basic framework | Fact Sheets on the European Union | European Parliament*. (n.d.). Retrieved July 4, 2022, from https://www.europarl.europa.eu/factsheets/en/sheet/71/environment-policy-general-principles-and-basic-framework
6. *Environmental governance assessment - Environment - European Commission*. (n.d.). Retrieved July 4, 2022, from https://ec.europa.eu/environment/environmental_governance/assessment/index_en.htm
7. *EU Policies & Regulations - WECOOP*. (n.d.). Retrieved July 4, 2022, from https://wecoop.eu/regional-knowledge-centre/eu-policies-regulations/
8. *European environmental law*. (n.d.). Retrieved July 4, 2022, from https://www.citizensinformation.ie/en/environment/environment_and_the_law/eu_environmental_law.html
9. *Good practices on sustainable development in protected areas*. (n.d.). Retrieved July 4, 2022, from https://www.europarc.org/library/previous-projects/impact-interreg-europe/good-practices-on-sustainable-development-protected-areas/
10. *GUIDE OF GOOD ENVIRONMENTAL PRACTICES*. (2017).
11. *List of the environmental legislation currently covered by the Fitness Check on Monitoring and Reporting*. (n.d.).
12. *Priorities: Sustainable development | United Nations Secretary-General*. (n.d.). Retrieved July 4, 2022, from https://www.un.org/sg/en/priorities/sustainable_development.shtml
13. *Pristatyta ES šalių agrarinės aplinkosaugos priemonių gerosios praktikos analizė - Naturalit*. (n.d.). Retrieved July 4, 2022, from https://naturalit.lt/pristatyta-es-saliu-agrarines-aplinkosaugos-priemoniu-gerosios-praktikos-analize/
14. *Sustainable Development and its Challenges in Developing Countries - IYNF - International Young Naturefriends*. (n.d.). Retrieved July 4, 2022, from https://www.iynf.org/2018/08/a-guide-to-sustainable-development-and-its-challenges-in-developing-countries/

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15. *Sustainable Development Goals | unfoundation.org*. (n.d.). Retrieved July 4, 2022, from https://unfoundation.org/what-we-do/issues/sustainable-development-goals/?gclid=Cj0KCQjwn4qWBhCvARIsAFNAMiiPb_BUaASUMn-kTNELL0U6PkH-gWECNFOxMPmUePtZel-12BUK3AaAiN8EALw_wcB
16. *THE 17 GOALS | Sustainable Development*. (n.d.). Retrieved July 4, 2022, from https://sdgs.un.org/goals
17. *The challenges of circularity in the EU Green Deal: why is industrial development in the EaP region crucial to achieve a just transition towards industry 5.0? - EU NEIGHBOURS east*. (n.d.). Retrieved July 4, 2022, from https://euneighbourseast.eu/young-european-ambassadors/blog/the-challenges-of-circularity-in-the-eu-green-deal-why-is-industrial-development-in-the-eap-region-crucial-to-achieve-a-just-transition-towards-industry-5-0/
18. *The EU Green Deal – a roadmap to sustainable economies*. (n.d.). Retrieved July 4, 2022, from https://www.switchtogreen.eu/the-eu-green-deal-promoting-a-green-notable-circular-economy/
19. *The Global Movement for Our Children's Future- World Top 20 Project*. (n.d.). Retrieved July 4, 2022, from https://worldtop20.org/global-movement?gclid=CjwKCAjwoduRBhA4EiwACL5RP_e8rpp7f5_BrKyJIMoqVVxeMvRQVsI6s6hgdCQLpHDP9fxUhRSLVxoC9AgQAvD_BwE
20. *Three major challenges set by the European Green Deal - LifeGate*. (n.d.). Retrieved July 4, 2022, from https://www.lifegate.com/european-green-deal

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greenACT

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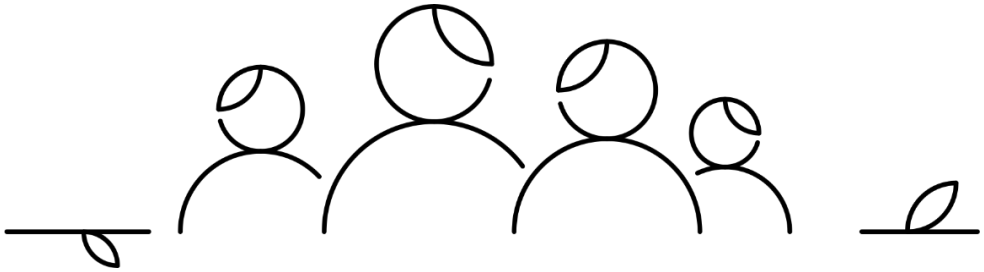

HANDBOOK FOR YOUTH WORKERS

Project number: 2020-3-RO01-KA205-094853

MODULE 6: Climate Change

Emphasys Centre

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Project Information

PROJECT: greenACT

PROJECT TITLE: Youth 'agents of change' on Climate Action and Environmental Sustainability

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PROJECT WEBSITE: https://greenactproject.eu/

PROJECT NO.: 2020-3-RO01-KA205-094853

PROJECT COORDINATOR: ASOCIATIA D.G.T

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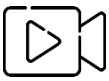
	Case study
	Additional Resources
	Tips
	Activities
	Reminder
	Video

General Objective of the Module

This module aims to address the adverse impacts of climate change on our planet. Learn how climate change negatively affects human health, what adaptation strategies can lessen the impacts, as well as how the European and international Agreements aim to fight it.

Topics:

1. Climate Change: the biggest health threat
2. Natural Catastrophes
3. European/International Agreements to fight climate change
4. Examples of good practices

Learning Goals

- To understand how climate change can impact human health
- To know how noise pollution can impact human health
- To distinguish the difference between climate change, global warming and weather
- To understand how natural disasters are related to climate change
- To outline the EU and International Agreements
- To know the idea behind these agreements and why they should be implemented nationally and internationally
- To differentiate what factors can shape and support more sustainable choices
- To know different good practices related to climate action
- To understand how different fields can be affected by climate change

This handbook is for youth workers targeting young people to enhance environmental awareness and promote ecocitizenship.

1. Climate Change: the biggest health threat

1.0. Overview of the topic

Climate change is arguably the greatest public health threat in a myriad of ways. Yet these impacts on health are still not well recognized and this topic aims to take a deep dive into these effects. Climate change-related weather extremes, such as heatwaves, storms, and floods, lead to increased health issues, from mental ones to food-, water- and vector-borne diseases. Air pollution is undoubtedly closely related to climate change, as both can influence each other through complex interactions in the atmosphere. However, it is often that people are not aware of how noise pollution can be hazardous to our health in various ways as well.

1.1. Introduction to climate change and the greenhouse effect

1.1.1. Climate change definition

Climate change is reffered to the changes not only in temperature but also in weather that happen in the long-term. These changes can be caused naturally or due to intensive human activities. Since the industrial revolution, 1800s, the climate has been changing as humans started burning fossil fuels, such coal, oil and gas. (United Nations, n.d.)

Causes and Effects of Climate Change | National Geographic

Video 1 *https://www.youtube.com/watch?v=G4H1N_yXBiA*

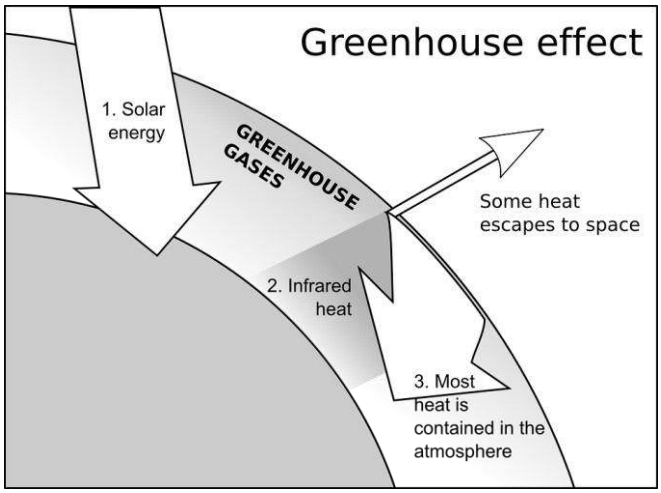
1.1.2. Greenhouse effect

The greenhouse effect is when the gases found in the Earth's atmosphere trap the sun's energy. This energy is then reabsorbed by the surface of the Earth, instead of being reflected back to the space, resulting in higher temperatures on the planet. a process that occurs when gases in Earth's atmosphere trap the Sun's heat. When this happens naturally, the stable temperature of the Earth is ensured, allowing the life to thrive and survive.

However, human activity changes Earth's natural greenhouse effect, causing rised levels of emission of so-called greenhouse gases (GHGs).

The reason behind the high surface temperatures is due to the solar heat that is being trapped instead of escaping the planet. The greenhouse gases when mantained in balanced levels, keep the surface temperatures around 33 degrees Celcius allowing life on Earth to thrive.

People have been releasing huge amounts of greenhouse gases into the atmosphere since the Industrial Revolution in the late 1700s and early 1800s. In the past century, that figure has risen dramatically. Between 1970 and 2004, greenhouse gas emissions increased by 70%. Carbon dioxide emissions, the most important greenhouse gas, increased by nearly 80% during that time. (National Geographic, n.d.)



1.2. Weather extremes and their impact on human health

Weather extremes can have a negative impact on human health, including concerns about excessive heat and cold. Storms and extreme weather, such as hurricanes and droughts, can result in secondary hazards such as flooding and wildfires.

1.2.1. Temperature Extremes

Heatwaves

As a result of climate change, global temperatures, as well as the frequency and intensity of heatwaves, will increase in the 21st century (National Institute of Environmental Health Sciences, n.d.). Heatwaves are one of the most dangerous natural hazards, as they can lead to heat cramps, body dehydration, heat exhaustion, heatstroke and most importantly, to deaths. WHO estimates that from 1998-2017 that more than 166000 people have died because of heatwaves, with 2003 being the year where more than 70 000 people died due to the heatwave in Europe.

Heat has significant indirect health consequences. Human behavior, disease transmission, health service delivery, air quality, and vital social infrastructures such as energy, transportation, and water can all be affected by extreme heat. (WHO, n.d.)

Cold

Climate change and global warming can also contribute to extreme cold weather events. Cold air may be discharged toward the equator when warm air destabilizes the polar vortex, which circulates cold air toward Earth's poles. Extreme cold can create cardiovascular stress as the body tries to maintain heat, as well as diseases such as hypothermia. Many non-climate factors, such as

the built environment and an individual's age or health state, influence vulnerability to cold weather occurrences. (WHO, n.d.)

1.2.2. Floods and Storms

In 2019, 396 catastrophes struck throughout the world, killing 11,755 people and affecting 95 million others at a cost of approximately 130 billion dollars (US). With 40% of the occurrences, 45 percent of the deaths, and 74% of the persons impacted, Asia was the most afflicted continent. Floods and storms were responsible for 68 percent of the total number of individuals impacted globally.

Storms (39%), droughts (34%), and floods (16%) were the leading causes of direct weather-related mortality worldwide. Following the onset of flooding, drowning is the most common cause of death. After a significant flooding event, morbidity might last for up to ten days. Between 1985 and 2014, a systematic study of the health effects of worldwide floods and storm catastrophes found that the health effects of these severe occurrences differed.

The health impacts include increases and sometimes decreases in:

- Injuries and carbon monoxide and gasoline poisoning after storms;
- Cases of infectious and parasitic diseases, such as gastrointestinal illnesses, respiratory infections, and skin or soft tissue infections, after storms and floods;
- Cardiopulmonary (floods) and skin complaints (storms and floods) (Ebi et al., 2021).

Wildfires

Many parts of the world have seen increases not only in the length of the wildfire season but also in the burned area. The major contributor to these increases is climatic changes with a global range between 260,000 and 600,000 mortality burden from wildfire smoke.

Wildfire smoke emits a variety of chemicals and gases and it is most consistently linked to negative respiratory health outcomes, with the strongest evidence for asthma exacerbations. Additionally to these, some other health effects caused by climate change-driven wildfires are burns, injuries, mental health diseases, and death due to exposure to flames or radiant heat.

1.3. Mental health

Extreme events and disasters can worsen or amplify existing mental health issues, as well as generate new mental health problems, whether acute or chronic and long-term. The financial stresses and communal strain that can result from the loss of homes, companies, and communities might increase the chance of domestic or community-based violence.

People who have been exposed to extreme events may experience a mix of positive mental health outcomes such as compassion, growth, and altruism as communities band together in the aftermath of a disaster, as well as negative mental health outcomes such as stress, fear, anxiety, and compassion fatigue (Ebi et al., 2021).

1.4. Food-, water- and vector-borne diseases

Extreme temperature and precipitation play a major role in the transmission of diseases. More specifically, the transport of infectious agents can be influenced by precipitation (through water and sanitation systems), while the growth and survival of pathogens and vectors can be affected by the temperature.

Three important categories of infectious diseases sensitive to climate change are:

- water-borne diseases;
- food-borne diseases; and
- vector-borne diseases

Water-borne and food-borne diseases occur when people come in contact with pathogens found in water or food. On the other hand, vector-borne diseases are linked to the infections that are transmitted especially by mosquitoes.

These are the ways, through which climate change can affect food- and water-borne diseases:

- through extreme events (floods and sea-level rise), water can be contaminated due to the presence in the environment of fecal-oral pathogens; and
- through climatic factors (temperature and humidity) that influence the survival and multiplication of pathogens (Cissé, 2019).

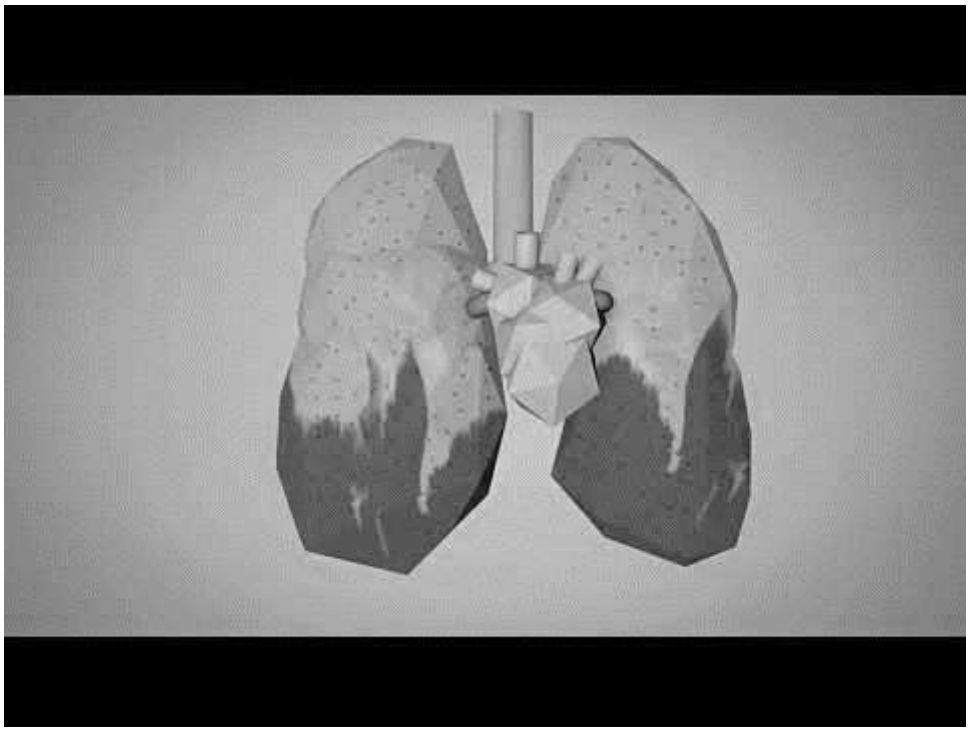
Read more about how Climate Change is exacerbating the spread of diseases:

https://news.climate.columbia.edu/2014/09/04/how-climate-change-is-exacerbating-the-spread-of-disease/

1.5. Air pollution

Air pollution can negatively impact human helath, as short or longterm exposure to it can lead to lung cancer, heart isease, infections in the reposritatory system.

WHO: Breathe Life - How air pollution impacts your body



Video 2 https://www.youtube.com/watch?v=GVBeY1jSG9Y

Particulate matter is the term used to describe particles found in the air (dust, dirt, soot, smoke, liquid droplets).

Particulate matter can vary in diameter. However, the smaller their diameter the greater health risk they can lead to. More specifically, particles less than 10 micrometers in diameter (PM10) can be inhaled into and accumulate in the respiratory system. On the other hand, particles less than 2.5 micrometers in diameter (PM2.5) ("fine" particles) pose the greatest health risks. According to the EEA, among the 27 EU Member States, PM2.5 was responsible for almost 307,000 premature deaths in 2019. The reason behind this is that fine particles can lodge deeply into the lungs because of their small size (WHO, n.d.)

There is a wide range of diseases that are caused by air pollution and some of these include:

- stroke,
- chronic obstructive pulmonary disease,
- trachea, bronchus, and lung cancers,
- aggravated asthma and
- lower respiratory infections
- type 2 diabetes,
- obesity,
- systemic inflammation,
- Alzheimer's disease and
- Dementia

The 2030 goal that was set by the European Commission is to reduce the number of premature deaths caused by PM2.5 by at least 55% compared with 2005 levels:

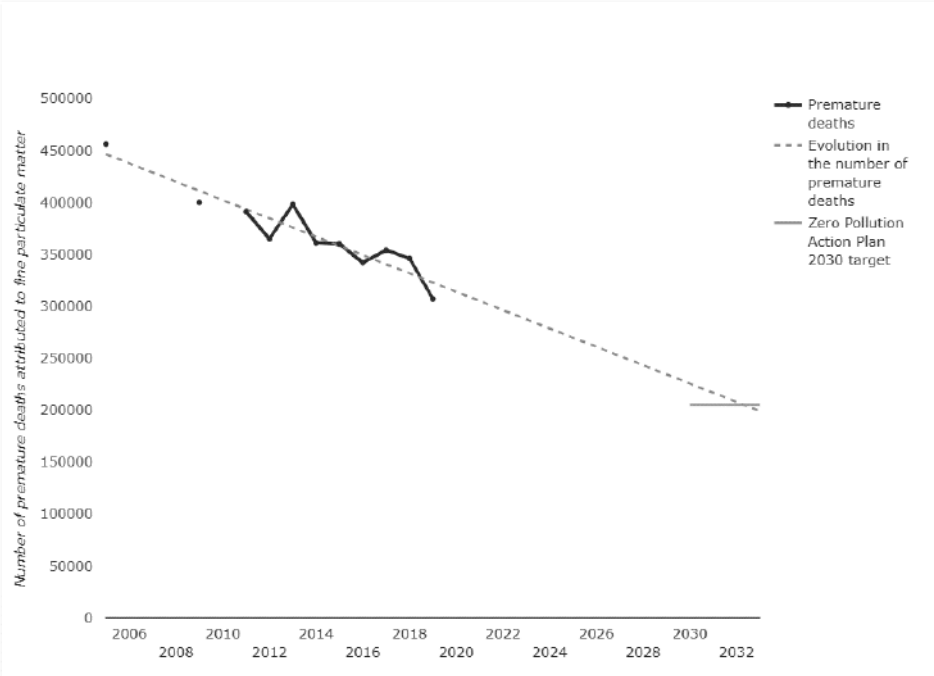


Figure 1: Number of premature deaths caused by fine PM by 2030.

Source: EEA https://www.eea.europa.eu/themes/air/health-impacts-of-air-pollution

Get inspired by campaigns created to fight air pollution:

https://breathelife2030.org/

https://friendsoftheearth.uk/clean-air

https://www.unep.org/get-involved/campaigns

1.6. Noise pollution

Noise pollution is defined as sounds, or noises, that can be harmful. Noise isn't a gas but most sources of carbon-dioxide and other greenhouse gases are also sources of noise. Sound is measured in decibels and any sounds that reach 85 decibels or higher can harm a person's ears. Rock concerts (110 to 120 decibels) and subway trains (90 to 115 decibels exceed this threshold.

From people to wildlife, from land to the sea and from traffic noise to rock concerts. Noise pollution can cause some serious health problems not only to humans but also to wild animals, such as whales and dolphins. The most common health issues caused to humans from constant levels of noise are:

- Hearing loss
- Stress
- High blood pressure

On the other hand, wildlife can be affected by noise pollution too. Noise that comes from ships or other human activities can be harmful to some sea creatures, of which survival depends on echolocation. (National Geographic, n.d.)

Noise isn't a gas but most sources of carbon-dioxide and other greenhouse gases are also sources of noise. Sound is measured in decibels and any sounds that reach 85 decibels or higher can harm a person's ears. Rock concerts (110 to 120 decibels) and subway trains (90 to 115 decibels exceed this threshold.

2. Natural Catastrophes

2.0. Overview

The key driver of climate change is the greenhouse effect, where heat-trapping pollutants became a blanket wrapped around Earth, resulting in global warming. Global warming has devastating effects, such as droughts, floods, wildfires and other disasters, which can collectively be referred to as climate change. The current topic's goal is to address the differences between climate change, weather and global warming and how these can lead to natural catastrophes.

2.1. Climate and weather: What is the difference?

It is common to conflate climate with weather. But whereas weather might change from day to day or year to year, climate is observed over an extended period of time. An area's climate is made up of typical seasonal temperatures, amounts of precipitation, and wind patterns. Wherever you are, there are different climates. Because it seldom receives rain or snow throughout the year, a desert, for instance, has an arid climate (NASA, 2005).

What's the difference between weather and climate? - BBC News

Video 3 https://www.youtube.com/watch?v=8J_RDfcy-00

In short, climate refers to how the atmosphere "behaves" over relatively long periods of time, whereas weather refers to the characteristics of the atmosphere over a short period of time.

Climate change refers to the long-term averages of daily weather. For example, summers seem hotter lately, and in various parts of the world, springtime is being noticed to come earlier now than it did 30 years ago. Both are signs of a possible change in the climate.

It is important to study climate and climate change as with the temperatures to globally rising, people and animals are affected. Forests, crop yields, water supplies and many types of

ecosystems are altering. Deserts are likely to expand into existing rangelands the sea levels are expected rise (NASA, 2005).

2.2. Natural disasters

2.2.1. Floods

A flood happens when water overflows or soaks land that is normally dry.

Image 1: Flooding in Bangladesh Source: https://education.nationalgeographic.org/resource/flood

After wildfires, floods are the natural disaster with the greatest global impact. Global warming causes sea levels to rise, extreme precipitation, as well as total precipitation to increase, putting a high risk of flooding.

The climate change is undoubtedly associated with coastal flooding due to sea level rise. With land ice melting and the ocean water expanding as it warms, the incidence of both high tide floods and reach of storm surge has significantly increased.

Through changes in significant flood precursors such extreme precipitation, total precipitation, and snow/ice melt, climate change increases flood risk in different ways such as:

- Warmer air may store more moisture because evaporation of moisture into the air is increased. More precipitation may subsequently fall as a result of this warm, water-rich air, raising the danger of runoff and flooding.
- Less snow, greater rain, and earlier snowmelt are changes brought on by long-term climate change, which raises the danger of floods and early-season runoff. (Climate Signals, n.d.)

2.2.2. Droughts

A prolonged period of deficient rainfall relative to the region's average is referred to as a drought.

Droughts by Nat Geo

Video 4 https://www.youtube.com/watch?v=gv66U4tnO3M

According to NASA, drought is considered to be a natural part of climate cycle. However, with the Earth's atmosphere becoming warmer and warmer, due to climate change, droughts are occurring more often the last 20 years becoming also more severe and widespread. It is expected that droughts will become more frequent.

Some areas will grow dryer as the climate on Earth changes, making them more prone to drought, while other areas will get wetter, making them more prone to flooding. This tendency is expected to continue if greenhouse gases are released into the atmosphere (Bates, 2021).

2.2.3. Wildfires and Droughts

Wildfires can be exacerbated by drought. Large-scale wildfires are more likely to occur when there is dry, hot, windy weather paired with dried-out (and more combustible) vegetation. A crucial ecosystem process, wildfire, is a worldwide occurrence that has both natural (lightning) and manmade sources of ignition. Wildfire fuels like grasses and trees may dry up and become more flammable during drought conditions. The likelihood of an ignite and the speed at which a fire spreads can both be accelerated by drought (Wildfire Management, n.d.).

How wildfires and droughts can impact wildlife?

Do you remember the Austrialian bushfires in 2019-2020?

It was estimated that 3 billion animals and more than 61 000 koalas were affected by the bushfire crisis in Austrialia.

Image 2: Fire and Rescue NSW team give water to a koala as they rescue it from fire in Jacky Bulbin Flat, New South Wales, Australia, Nov. 21, 2019 in this picture obtained from social media. Source: https://www.voanews.com/a/east-asia-pacific_koalas-suffer-aus

The potential of wildfires to swiftly expand and destroy vital habitat is one of their most hazardous characteristics. 10 kilometers (6 miles) per hour is the maximum pace at which a forest may be burned by a wildfire. All creatures are severely impacted by habitat loss. Wildfires pose a particular hazard to species that use the same breeding grounds and nesting locations each year. For a species to recover after missing a mating season and reestablishing a safe habitat, it might occasionally take years.

Can you list types of animals that would be affected by a drought and wildfire if both occurred in the local community? What would happen to their habitats? How would their food source be impacted? What else could happen to the animals?

Wildfires have a negative influence on fish and marine mammals in addition to terrestrial creatures. Burned plastics and other non-natural materials during wildfires, resulting in toxic run-off that can pollute bodies of water. Dangerous algal blooms that can result in the depletion of undersea oxygen and the creation of dead zones can happen when rain washes excessive amounts of nutrients, such as phosphorus and nitrogen, into aquatic environments (IFAW, 2021).

Additional Resources:

1. European Drought Observatory
   https://edo.jrc.ec.europa.eu/edov2/php/index.php?id=1000
2. Drought lesson plan
   https://www.aidr.org.au/media/5268/aidr-drought-lesson-plan.pdf
3. WHAT ARE EL NIÑO AND LA NIÑA?
   https://www.concernusa.org/story/el-nino-and-la-nina/#:~:text=El%20Ni%C3%B1o%20and%20La%20Ni%C3%B1a%20affect%20n

ot%20only%20ocean%20temperatures,is%20linked%20to%20increased%20flooding.

4. Article about Droughts, Floods and Wildfires https://science2017.globalchange.gov/chapter/8/

2.2.4. How climate change is related to natural disasters

Growing data suggests that the number, frequency, and duration of natural disasters are being affected by the constant increase in global temperatures. Heatwaves, significant precipitation, droughts, and tropical cyclones are just a few of the weather and climate extremes that are already being impacted by human-induced climate change (Zurich.com, 2022).

1. Ask students to share their knowledge about natural catastrophes in order to get them engaged in the subject:

-*What are examples of natural disasters they know?* Floods, droughts, wildfires, droughts, earthquakes, volcanoes, tsunamis, snowstorms, etc.

-After that they should define natural disasters.

Answer: A natural event or force that causes damage to property and/or loss of life.

- Which of these natural disasters are related to weather?

Answer: All the above-mentioned are related to weather, apart from earthquakes, volcanoes, and tsunamis.

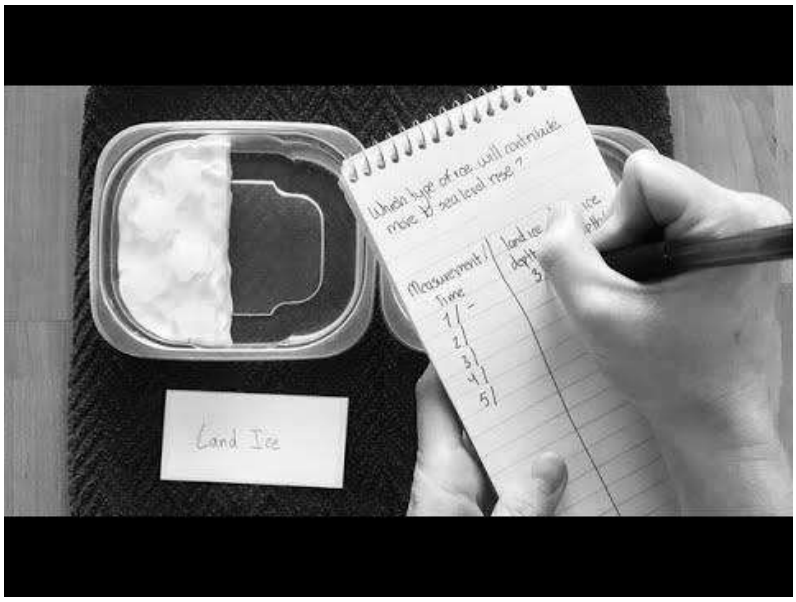
2. Time to experiment how melting ice contributes to sea level rise. Does it make a difference whether that melting ice is on land or in the sea?

See Lesson Plan 2 for instructions.

Use the link below and the following video for better understanding:

https://www.jpl.nasa.gov/edu/teach/activity/whats-causing-sea-level-rise-land-ice-vs-sea-ice/

Learning Space: How Melting Ice Causes Sea Level Rise



Video 5:
https://www.youtube.com/watch?time_continue=204&v=tYYSndaxl8w&feature=emb_title

3. European/International Agreements to fight climate change

3.0. Overview

United Nations Framework Convention on Climate Change (UNFCCC) is the parent agreement of the 2015 Paris Agreement, which mainly aims at climate-neutrality before the end of the century. In order to not exhaust what the planet can supply, climate action should be strongly linked with sustainability. One of the main aims of the 2030 Agenda is to ensure that the planet and its natural resources will be ensured for the current and next generations. Hence, this topic will focus on explaining and describing the European and International agreements and how they seek to fight climate change.

3.1. United Nations Framework Convention on Climate Change

3.1.1. What is the United Nations Framework Convention on Climate Change?

UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE

Video 6 https://www.youtube.com/embed/CRt3T_VPcKA?feature=oembed

The UNFCCC was established on March 21st, 1994, with the goal of creating a global environmental convention and stabilizing atmospheric greenhouse gas concentrations to a level that will protect the climate system from detrimental human influence. Parties to the Convention are any of the 197 nations that have ratified it.

3.1.2. What is the goal of UNFCCC?

Keeping greenhouse gas concentrations at a level that is safe for the climate system is the Convention's ultimate aim. This level should be attained in a period of time long enough to allow ecosystems to adapt to climate change naturally, while also ensuring that food supply is not threatened and that the economy is sustainably expanding.

Industrialized countries are the most expected to take actions into cutting emissions, as they are considered to be a major source of the greenhouse gas emissions. These countries are also called Annex I countries, and are EU countries, UK, and USA (List of Annex I Countries - OECD, n.d.).

3.1.3. How are climate change activities being supported?

Through financial support, developing countries are being supported to take actions to fight climate change. The Global Environment Facility oversees a system of grants and loans that has been established by the Convention. Additionally, industrialized nations consent to transfer technology to less developed countries. (United Nations Climate Change, n.d.)

Additional Resources:

1. **Science in the negotiations**
   https://unfccc.int/topics/science/the-big-picture/science-in-the-negotiations
2. **Introduction to climate finance**
   https://unfccc.int/topics/climate-finance/the-big-picture/introduction-to-climate-finance

3.2. Kyoto Protocol

3.2.1. What is the Kyoto Protocol?

What is the Kyoto Protocol?

Video 7 https://www.youtube.com/embed/DFhuNKNDrLg?feature=oembed

The Kyoto Protocol is a global agreement between developed countries that imposes strict limitations on greenhouse gas emissions. It was formally adopted on the 11th of December 1997 and was active since 2005 until 2020. The Kyoto Protocol had 192 Parties.

The Kyoto Protocol, in short, operationalized the United Nations Framework Convention on Climate Change by requiring industrialized nations and economies in transition to set and achieve individual emission reduction targets for greenhouse gases (GHG).

3.3. Paris Agreement

3.3.1. What is the Paris Agreement?

Ever wondered: What is the 'Paris Agreement', and how does it work

Video 8 https://www.youtube.com/embed/WiGD0OgK2ug?feature=oembed

The earth has warmed by around 1°C since the industrial revolution. The Paris Agreement, a global climate change agreement, attempts to stop this temperature rise by encouraging countries to reduce their greenhouse gas emissions. On November 4th, 2016, the Paris Agreement came into force, although a t the COP21 climate meeting in Paris in December 2015, 196 Parties adopted it. The major objective is to keep warming below 2 degrees Celsius, and preferably, below 1.5 degrees Celsius, relative to pre-industrial levels.

For this longterm goal to be achieved, all the countries that ratified the agreement, come into force together for the first time aiming to reduce their emissions and reach climate-neutrality before the end of the century.

3.3.2. How does the Paris Agreement work?

All the governments agreed to be transparent about the progress they make toward the long-term objectives, meet every five years, and report to not only among them but also the public on their achievements and the many ways their nations are putting climate action into practice.

For those countries that need it, the Paris Agreement provides a structure for receiving aid in the form of money, expertise, and capacity building. The less developed nations are receiving financial assistance from the more developed ones so that they can undertake the necessary large-scale

investments in mitigation and adaptation (United Nations Climate Change, 2022). (European Commission, 2022).

3.4. EU Green Deal

3.4.1. What is the European Green Deal?

GREEN DEAL – A European Green Deal

Video 9 https://www.youtube.com/embed/H37grur6HaU?feature=oembed

The European Green Deal is a strategy of the Paris Agreement implementation with the focus being on Europe and ways to become climate neutral by 2050. It consists of a set of policy initiatives by the European Commission to address environmental challenges and climate change and ensure economic growth without depletion of resources. By 2050, every EU member state agreed to make the EU the first continent to be climate neutral, lower emissions by at least 55% by 2030 compared to 1990 levels.

The European Comission proposes that for the CO2 and other GHG emissions to be reduced, some transformations need to be considered. For instance, mobility should be sustainable, greener, and acessible for everyone. The goal in numbers is to reduce the emissions from cars by 55% by 2030, where by 2035 there will be 0% of emissions from new cars.

In the energy and transport, construction and renovation sector a greater amount of renewable energy resources are to be used, increasing this way also the energy efficiency of buildings. It is estimated that 35 million buildings could be renovated by 2030 and 160,000 additional green jobs could be created in the construction sector by 2030. (European Commission, n.d.)

Additional resources – More about environmental policies:

1. **Communicating a Green and Digital recovery for Europe (ppt)**
   https://drive.google.com/file/d/1lH4w9-_S5BuLi3_9BbQB6nS_qRPCbPgg/view
2. **EMAS, a premium environmental management tools for organisations (ppt)**
   https://drive.google.com/file/d/1HdKgSLBuUb0jtZWaatWv5_evhdL7h-y9/view
3. **Environmental Regulations (ppt)**
   https://drive.google.com/file/d/1kHYUa_aec6_WfuvcIxmqrJF9aTBIKmUF/view
4. **Environmental Policy&Law of the EU (ppt)**
   https://www.slideshare.net/berlatre/environmental-policy-eu
5. **A quiz game by UN providing climate solutions:**
   https://mission1point5.org/

4. Examples of good practices

4.0. Overview

As the need for climate action arose, the fourth topic of this module will provide good practices and initiatives carried out on both European and international levels, in order to raise awareness. This will be the tool to inspire learners to find innovative solutions to climate change. It is aimed to state good practices of different fields so that the interrelation of the impacts of climate change on different sectors of society is addressed, therefore, everyone needs to start taking action.

4.1. Good practices on climate action

4.1.1. Companies combating climate change

Alphabet

Google's parent company, Alphabet, is a titan in the technology sector and a pioneer in environmental sustainability. Ten years after becoming the first company of its size to match its entire power usage with renewable energy, the corporation achieved carbon neutrality in 2007. Alphabet aims to be the first significant business to run entirely on carbon-free energy by the year 2030. It intends to achieve this by maintaining its investment in renewable energy generating and storage technologies, both of which can be advantageous to other companies (Noyes, 2022).

Beyond Meat

The University of Michigan's peer-reviewed Life Cycle Analysis evaluated the Beyond Burger's environmental impact in comparison to a typical quarter-pounder. The analysis showed that compared to a kg of beef, the Beyond Burger produces 90% less greenhouse gas emissions, uses 46% less energy, has >99% less of an impact on water scarcity, and 93% less of an impact on land use (Keoleian and Heller, 2018).

HP

The global leader in information technology, HP, has made combating climate change a top priority for the following decades. In comparison to 2018, the corporation has pledged to eliminate 75% of its single-use plastic packaging by 2025.

To keep its products operating for a longer period of time, HP is also investing in the development of energy-efficient tools and services. For instance, the business stopped using plastic document bags and power cord ties in its packaging in 2019. HP is also actively moving away from expanded plastic foam packaging cushions in favor of those made from recycled, molded pulp, which should prevent the need to dispose of over 900 tons of expanded plastic foam annually.

Microsoft

By 2025, Microsoft aims to use only renewable energy, and by 2030, to be carbon negative.

Additionally, there are plans to completely eliminate waste at the company's corporate headquarters and to power all future structures entirely with renewable energy.

Microsoft is also working on the AI development to adopt sustainability measures that reduce the detrimental environmental effects of farming. Microsoft users will subsequently be able to employ this technology to lessen their own carbon footprints (Noyes, 2022).

4.1.2. Innovation

Plastic road

PlasticRoad - A revolution in building roads

Video 10 https://www.youtube.com/embed/QBZN2UAfvwY?start=3&feature=oembed

The Plastic Road concept, first presented in 2015 by KWS, aims to reduce the amount of plastic waste in the environment. The way to achieve this is by recycling plastic waste into lightweight modules with hollow interiors that can be fitted with cables and plastic pipes and enable extra water to drain. This plastic road will have a lesser ecological impact. When the components are no longer useful, they can be recycled once more, which promotes a circular economy and a cleaner environment.

4.1.3. Climate action

According to UN there are 8 332 370 climate actions taken around the world. ACTNOW is a campaign and initiative of UN aiming to encourage more individuals to act now!

The ACTNOW app can be used to track the climate actions together with the actions from the rest of the globe: https://actnow.aworld.org/

People's lifestyles have a significant impact on our planet. For instance, the private households account for two-thirds of global greenhouse gas emissions. Sectors, like energy, food, and transport are responsible for 20% of lifestyle emissions. Therefore, it is important to make more sustainable choices and start taking action to combat climate crisis.

Examples and tips on climate actions in the above-mentioned sectors:

1. **Energy**: Reduce the heating and cooling, use energy-efficient electric appliances like LED lights, wash your clothes in cold water, and hang up your clothes to dry rather than using a dryer.

The best way to reduce the energy consumption is to track it! There are several apps that enable the user to track the energy usage, encouraging them to reduce the electricity usage and save energy.
Find them here:
https://www.conserve-energy-future.com/green-apps-to-track-energy-usage.php

2. **Transport**: Drive less, walk and ride a bike more! For longer distances, use public transportation or carpooling.

Blablacar is an online carpooling marketplace and it connects drivers and passengers who are prepared to travel together between cities and split the cost of the trip via its website and mobile apps. You can find their website here: https://www.blablacar.co.uk/

3. **Food**: Eating more vegetables than meat and dairy can lower the environmental impact. In general, producing plant-based foods uses less energy, water, and land hence produces fewer greenhouse gas emissions.

4. **Food waste**: It is important to buy what you need and consume what you buy! Throwing away food, resources and energy that have been used for the food production are being thrown away too. Additionally, methane, a potent greenhouse gas, is produced when food rots in a landfill.

Too good to go is an App that enables customers to buy and collect food that is about to go wasted. A surprise bag of food is purchased at a very affordable price directly from the store and businesses.

Too good to go app for food waste management:
https://play.google.com/store/apps/details?hl=en&id=com.app.tgtg

21 Inspiring Initiatives Working to Reduce Food Waste Around the World:
https://foodtank.com/news/2015/01/twenty-one-inspiring-initiatives-working-to-reduce-food-waste-around-the-wo/

5. **Reduce, reuse, repair & recycle:** Goods, such as clothing and electronics that people purchase have a carbon emission background, as the raw materials used for those goods need to be extracted, manufactured and transformed to a whole new product. This product then is being transported at the market contributing to global greenhouse gas emissions. Second hand clothing, equipment or repairing broken products can help reducing the environmental impact of the constant production of goods.

Repair cafes are meeting places for people willing to fix things together with expert volunteers. At the Repair cafes, tools and materials needed for the repairs can also be found. In the following website you can find your nearest repair cafe and more about this initiative: https://www.repaircafe.org/en/

Find out more about climate actions that can be taken here:
https://www.un.org/en/actnow/ten-actions

References

United Nations. n.d. *What Is Climate Change? / United Nations*. [online] Available at: <https://www.un.org/en/climatechange/what-is-climate-change> [Accessed 17 June 2022].

National Geographic. n.d. *Greenhouse Effect*. [online] Available at: <https://education.nationalgeographic.org/resource/greenhouse-effect> [Accessed 20 June 2022].

National Institute of Environmental Health Sciences. n.d. *Weather Extremes*. [online] Available at: <https://www.niehs.nih.gov/health/topics/agents/extremeweather/index.cfm> [Accessed 20 June 2022].

World Health Organization. n.d. *Heat and Health*. [online] Available at: <https://www.who.int/news-room/fact-sheets/detail/climate-change-heat-and-health> [Accessed 20 June 2022].

Ebi, K., Vanos, J., Baldwin, J., Bell, J., Hondula, D., Errett, N., Hayes, K., Reid, C., Saha, S., Spector, J. and Berry, P., 2021. Extreme Weather and Climate Change: Population Health and Health System Implications. *Annual Review of Public Health*, 42(1), pp.293-315.

Cissé G. (2019). Food-borne and water-borne diseases under climate change in low- and middle-income countries: Further efforts needed for reducing environmental health exposure risks. Acta tropica, 194, 181–188. https://doi.org/10.1016/j.actatropica.2019.03.012

World Health Organization. n.d. Health consequences of air pollution on populations. [online] Available at: <https://www.who.int/news/item/15-11-2019-what-are-health-consequences-of-air-pollution-onpopulations> [Accessed 22 June 2022].

National Geographic. n.d. *Noise Pollution*. [online] Available at: <https://education.nationalgeographic.org/resource/noise-pollution> [Accessed 22 June 2022].

climateurope. n.d. What is climate? *What is climate change?*. [online] Available at: <https://www.climateurope.eu/what-is-climate-and-climate-change/> [Accessed 23 June 2022].

NASA. 2005. NASA - *What's the Difference Between Weather and Climate*?. [online] Available at: <https://www.nasa.gov/mission_pages/noaa-n/climate/climate_weather.html> [Accessed 23 June 2022].

Climate Signals. n.d. *Floods*. [online] Available at: <https://www.climatesignals.org/pillars/climate-change-floods> [Accessed 26 July 2022].

Bates, S., 2021. Drought Makes its Home on the Range – Climate Change: Vital Signs of the Planet. [online] NASA Global Climate Change. Available at: <https://climate.nasa.gov/news/3117/drought-makes-its-home-on-the-range> [Accessed 26 July 2022].

NIDIS. n.d. Wildfire Management. [online] Available at: <https://www.drought.gov/sectors/wildfire-management> [Accessed 26 July 2022].

IFAW. 2021. How wildfires impact wildlife | IFAW. [online] Available at: <https://www.ifaw.org/journal/wildfires-impact-wildlife> [Accessed 26 July 2022].

Zurich.com. 2022. Is climate change making natural hazards worse?. [online] Available at: <https://www.zurich.com/en/knowledge/topics/natural-hazards/how-climate-change-is-making-natural-disasters-worse> [Accessed 26 July 2022].

Oecd.org. n.d. List of Annex I Countries - OECD. [online] Available at: <https://www.oecd.org/env/cc/listofannexicountries.htm> [Accessed 18 August 2022].

United Nations Climate Change. n.d. What is the United Nations Framework Convention on Climate Change?. [online] Available at: <https://unfccc.int/process-and-meetings/the-convention/what-is-the-united-nations-framework-convention-on-climate-change> [Accessed 18 August 2022].

United Nations Climate Change. 2022. *The Paris Agreement*. [online] Available at: <https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement> [Accessed 19 August 2022].

Climate Action. 2022. *Paris Agreement*. [online] Available at: <https://ec.europa.eu/clima/eu-action/international-action-climate-change/climate-negotiations/paris-agreement_en> [Accessed 19 August 2022].

Keoleian, G. and Heller, M., 2018. *Beyond Meat's Beyond Burger Life Cycle Assessment: A detailed comparison between a plant-based and an animal-based protein source*. [online] Center for Sustainable Systems. Available at: <https://css.umich.edu/publications/research-publications/beyond-meats-beyond-burger-life-cycle-assessment-detailed> [Accessed 22 August 2022].

Noyes, L., 2022. *The Top 10 Publicly Traded Companies Fighting Climate Change in 2022 - LeafScore*. [online] LeafScore. Available at: <https://www.leafscore.com/blog/top-10-publicly-traded-companies-fighting-climate-change-in-2021/> [Accessed 22 August 2022].

European Commission - European Commission. n.d. *Delivering the European Green Deal*. [online] Available at: <https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal/delivering-european-green-deal_en> [Accessed 24 August 2022].

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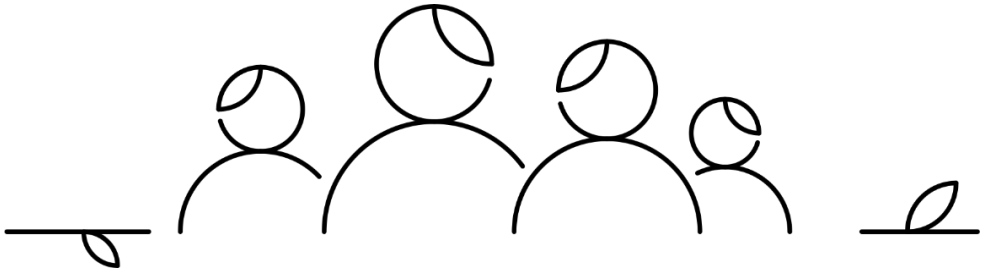

LESSON PLANS FOR YOUTH WORKERS

Project number: 2020-3-RO01-KA205-094853

MODULE 1: Human impact in natural systems – environmental challenges

DGT ASSOCIATION

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Project Information

PROJECT: GreenACT

PROJECT TITLE: Youth 'agents of change' on Climate Action and Environmental Sustainability

ACRONYM: GreenACT

PROJECT WEBSITE: https://greenactproject.eu/

PROJECT NO.: 2020-3-RO01-KA205-094853

PROJECT COORDINATOR: ASOCIAȚIA D.G.T

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Module 1: Human impact in natural systems – environmental challenges	
Topic 1: Different Ecosystems and their Importance	
Lesson Plan 1 – Presentation of ecosystems and their importance	
Duration: 90 minutes - 30 minutes of indoor activities and 60 minutes of outdoor activities	
Short Description of the Lesson	The topic presents the definition of the ecosystem, the different types of ecosystems and the importance of the different ecosystems. The first part of the lesson aims to be an introductory section of the overall document, bringing forward the key elements treated and making sure to differentiate the different types. This is followed by more defined information on the reasons behind the importance, and the roles of the ecosystem and finalising with a conclusion.
Learning Goals:	To offer the needed tools to be able to tell what an ecosystem is. To differentiate the different types of ecosystems. To be aware of the importance of ecosystems.
Target Group -	Youth Workers between 16 and 25 years old
Educational Approach	This will be implemented using non-formal methods. The theoretical part will be accompanied by a ppt presentation (course support).
Link to School Curricula (if applicable)	
Facility/ Equipment	● Classroom ● Internet access ● Projector ● Flipchart
Tools/ Materials	● Pens ● Markers ● Flipchart paper ● Paper sheets ● Post-its
The main tasks	1. <u>Explore your area! Ecosystem reflections</u> Participants are divided into groups of 3-4 people. The task is to explore the community and to find out what types of ecosystems can be found. Remind the participants to not only stick to the big ecosystems presented before, but to take into consideration the

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	smaller ones as well, such as the bacterial ecosystem, flower ecosystem and so on (abiotic or biotic). Time needed: ● 30 minutes to explore the community ● 30 minutes for discussion <u>Possible questions for debriefing:</u> 1. What did you do? 2. What types of ecosystems did you find? 3. How did you work in your team? Did you have a strategy? Which one? 4. How did you feel doing this activity? 5. What have you learned? 2. **Watching the movie** - How does the energy flow in the ecosystem - https://www.youtube.com/watch?v=5jBV9vJmXZI After watching the video, a discussion about the key elements presented in the movie can be facilitated. 3. **The ecosystems** The group of participants will be split into 4 groups: ● seaweed ● fishes ● pelicans ● humans Each group will have 2 lives and the following tasks: seaweed - they will have 2 minutes to find a place to hide. In the moment in which they will find the place, they will not be allowed anymore to move. fishes - they will also have 2 minutes to find a place to hide. When the activity will start their task will be to find the seaweed and to "eat" it and to hide from the pelicans and humans. pelicans - they will also have 2 minutes to find a place to hide. When the activity will start their task will be to find the seaweed and the fishes and to "eat" them and to hide from the humans. humans - they will be allowed to enter the last one. They will have the task to find all the other species and to "eat" them. Time needed: ● 2 minutes for letting the seaweed to hide ● 2 minutes for letting the fishes to hide ● 2 minutes for letting the pelicans to hide ● 10 minutes for completing the tasks ● 20 minutes for discussions <u>Possible questions for debriefing:</u> 1. How was it for you to be involved in such activity?

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	2. How was it for you to follow the rules? 3. What can we learn from this activity? This activity can be done with species from different ecosystems (for example with species from forest ecosystems, such as: weed, small birds, predatory birds, humans).

Module 1: Human impact in natural systems – environmental challenges

Topic 2: Nature protection

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Lesson Plan 2 – Biodiversity and nature protection	
Duration: 80 minutes of indoor activities (30 minutes theoretical part and 50 minutes for practical part and debriefing)	
Short Description of the Lesson	This lesson aims to bring a more theoretical overview of the situation for the biodiversity and nature protection situation, followed up by a practical section by creating an activity.
Learning Goals	To develop certain ideas regarding nature protection To develop certain types of behaviour to further protect nature and the surrounding environment
Target Group -	Youth Workers between 16 and 25 years old
Educational Approach	This will be implemented using non-formal methods. The theoretical part will be accompanied by a ppt presentation (course support).
Link to School Curricula (if applicable)	
Facility/ Equipment	● Classroom ● Internet access ● Projector
Tools/ Materials	● Pens ● Markers ● Flipchart paper ● Paper sheets
The main tasks	**Exploring the ecosystem protection in my community** The first step of the activity - The group of the participants will be divided into small groups of 4-5 participants. Each group will have the task to find at least 5 measures that the local authority from their community takes for the protection of ecosystems. The second step of the activity - the same small groups of participants will now have the task to propose some new measures that the community should consider in order to protect the ecosystem. Time needed: ● 15 minutes for completing the task ● 15 minutes for proposing the new measures ● 20 minutes for discussions <u>Possible questions for debriefing:</u> 1. What are the measures that you have found? 2. Where did you find the information describing them?

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	3. What are the new measures that your group wants to propose? 4. What are the measures that people, in general, can take to protect the ecosystems? 1. What have you learned from this activity?

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Lesson Plan 3 – Presentation of biodiversity loss and the causes	
Duration: 90 minutes - 30 minutes theoretical part and 60 minutes for practical part (quiz and debate)	
Short Description of the Lesson	This lesson aims to further explain the causes behind biodiversity loss through habitat destruction, overexploitation, climate change, pollution, agricultural intensification, and invasive species, giving multiple examples and descriptions of each subtopic.
Learning Goals	To provide specific knowledge on biodiversity To provide specific knowledge on invasive species To describe general know-how to prevent the loss of the biodiversity
Target Group -	Youth Workers between 16 and 25 years old
Educational Approach	This will be implemented using non-formal methods. The theoretical part will be accompanied by a ppt presentation (course support).
Link to School Curricula (if applicable)	
Facility/ Equipment	• Classroom • Internet access • Projector
Tools/ Materials	• Pens • Markers • Flipchart paper • Paper sheets
Main tasks	1. **Quiz - Test your knowledge of biodiversity loss!** https://populationmatters.org/test-your-knowledge-biodiversity-loss 2. https://climateprimer.mit.edu/climate-science MIT Climate Science, Risk & Solutions is an interactive, online textbook from MIT that can be used as a supplemental resource for high school teachers approaching the topic with their classes. The site offers a historical timeline, graphs, and images to tackle the science, and the slick interactive features will be engaging to teens. Students can scroll through the entire text, or jump among the topics, which are divided into sections: Climate Science, Climate Change, Risk, and Solutions. Each chapter uses different elements

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	to engage students; read-aloud sections, interactive graphs, and short quizzes help break up the dense text. https://climatekids.nasa.gov/menu/watch/ 3. **Debates** - Do you think that in the future we will be affected by climate change? The facilitator will split the room in two, sticking down on the floor the following messages: ● I agree ● I don't agree The participants will be invited to take part in this activity and to position themselves in the room in accordance with their answers to the next questions/sentences and to explain their answers: ● It is too late to prevent climate change. ● Is it the responsibility of the governments to protect nature? ● In the future the most affected countries by climate change will be the ones that are not so developed. ● After the COVID-19 restrictions were lifted the pollution levels decreased. ● Should people focus more on endangered species rather than on the ones that are not at risk? ● Will the effects of climate change be worse than a disease? ● The effects of climate change will drive more people into poverty. ● At the moment, over two-thirds of the land in Africa is degraded. Does this affect us as Europeans? ● Do the daily activities that we do increase climate changes? ● During the COVID-19 pandemic the climate change effects decreased. Time needed: ● 30 minutes for debates ● 20 minutes for debriefing Possible questions for debriefing: ● How did you feel during this activity? ● What have you learned? ● What action can you take in your daily life to protect nature?

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Module 1: Human impact in natural systems – environmental challenges
Topic 4: Urban & Infrastructure Pressure on Ecosystems and Biodiversity
Lesson Plan 4 – Presentation of the effect of urban and infrastructure pressure on the ecosystems and biodiversity
Duration: 360 minutes - 30 minutes for the theoretical part and 330 minutes for the practical part implemented in the community

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Short Description of the Lesson	This lesson aims to show the effects that urban and infrastructure pressure have on both the ecosystems and biodiversity through short descriptions, as well as giving examples of Sustainable Development Goals that should be reached when it comes to the urbanisation movement.
Learning Goals	To give information on how the process of urbanisation works To point out the effects on the ecosystems and the biodiversity
Target Group -	Youth Workers between 16 and 25 years old
Educational Approach	This will be implemented using non-formal methods. The theoretical part will be accompanied by a ppt presentation (course support).
Link to School Curricula (if applicable)	
Facility/ Equipment	• Classroom • Internet access • Projector • A field to create the gardens • Access to water sources for planting
Tools/ Materials	• Markers • Flipchart paper • Seeds, plants • Shovels • Gloves
Main tasks	**Plant your vegetables! (in order to implement this activity, the young people will need the agreement of the local authority in order to create the city garden)** The group of participants will be split into groups of 4-5 persons. Each group will have the task to find a place in their community that can be changed into a small garden. Together with the facilitator, the young people will need to choose some vegetables that can be gardened. The idea of this activity is to involve young people in their community and take advantage of the places that are not used and create a vegetable garden. Time needed: 1 day to plant the vegetables <u>Possible questions for the debriefing:</u> • How did you feel during this activity?

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	● What have you learned? ● What action can you take in your daily life to protect nature?

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Module 1: Human impact in natural systems – environmental challenges	
Topic 5: Deforestation & Intensive Farming	
Lesson Plan 5 – Presentation of deforestation phenomena and intensive farming	
Duration: 60 minutes - 30 minutes for the theoretical part and 30 minutes for the practical part	
Short Description of the Lesson	This lesson brings forward a couple of aspects such as: animal impact on the cultivable lands, plant and animal species inhabitation, the logging phenomenon, as well as forest fires followed up by their causes and expansion of infrastructure.
Learning Goals	To raise awareness on the topics of deforestation and intensive farming. To offer the tools and knowledge on different types of agriculture and deforestation
Target Group -	Youth Workers between 16 and 25 years old
Educational Approach	This will be implemented using non-formal methods. The theoretical part will be accompanied by a ppt presentation (course support).
Link to School Curricula (if applicable)	
Facility/ Equipment	• Classroom • Internet access • Projector
Tools/ Materials	• Pens • Markers • Flipchart paper • Paper sheets
Main tasks	1. **013 ARTICLE READING How Does Agriculture Cause Deforestation, and How Can We Prevent It?** https://sentientmedia.org/how-does-agriculture-cause-deforestation/ 2. **The Fire in the Mediterranean Region: A Case Study of Forest Fires in Portugal:** https://www.intechopen.com/chapters/55996

Module 1: Human impact in natural systems – environmental challenges
Topic 6: Examples of good practices

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Lesson Plan 6 – Presentation of good practices that help to decrease the human impact on environment	
Duration: 360 minutes - 30 minutes of indoor activities and 330 minutes of outdoor activities	
Short Description of the Lesson	This lesson aims to show examples of good practices, as well as means to do them. This lesson focuses more on the practical aspect by having the participants do a concrete activity in which they have to act for a certain issue that they will pick.
Learning Goals	To offer knowledge on already existing good practices in terms of the human impact in natural systems – environmental challenges
Target Group -	Youth Workers between 16 and 25 years old
Educational Approach	This will be implemented using non-formal methods. The theoretical part will be accompanied by a ppt presentation (course support).
Link to School Curricula (if applicable)	
Facility/ Equipment	● Classroom ● Internet access ● Projector ● An area in the community with garbage
Tools/ Materials	● Markers ● Flipchart paper ● Laptops ● Garbage bags ● Gloves
Main tasks	**Take action!** The group of participants will have the task to choose an action that they can do at that moment, to protect the environment. They will have 10 minutes to think about the action that they want to take and the necessary materials that they need (garbage bags, gloves, laptops etc.) Time needed: ● 10 minutes ● 60 minutes for implementing the activity ● 20 minutes debriefing <u>Possible questions for debriefing:</u> 1. How did you choose the activity? 2. Which was your strategy in doing the activity?

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	3. How did you feel while implementing the activity? 4. What impact do you think this activity will have on your community? 5. What have you learned from this activity?

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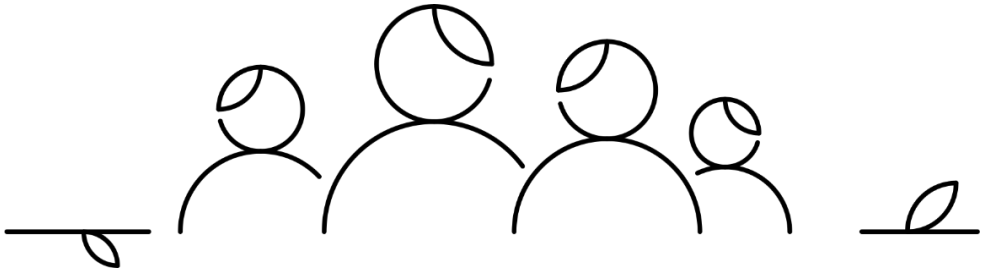

LESSON PLANS FOR YOUNG PEOPLE

Project number: 2020-3-RO01-KA205-094853

MODULE 2: Green living - adopting an eco-friendly lifestyle

DRUŠTVO BODI SVETLOBA

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Project Information

PROJECT: GreenACT

PROJECT TITLE: Youth 'agents of change' on Climate Action and Environmental Sustainability

ACRONYM: GreenACT

PROJECT WEBSITE: https://greenactproject.eu/

PROJECT NO.: 2020-3-RO01-KA205-094853

PROJECT COORDINATOR: ASOCIAȚIA D.G.T

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Module 2: Green living - adopting an eco-friendly lifestyle	
Topic 1: Healthy food consumption	
Lesson Plan 1 – Presentation of the main goals of the food consumption policies at EU and national level **-Group task for food consumption reflections**	
Duration: 90 minutes - 30 minutes of indoor activities and 60 minutes of outdoor activities	
Short Description of the Lesson	This topic focuses on food consumption policies at the national and international levels. The policy framework and policy tools in support of sustainable food consumption, quality organic food strategies and procedures, examples of best practices and actions are presented. Organic food policy is seen as the basis for healthy food consumption and ensuring successful organic agriculture development.
Learning Goals:	To know the food consumption policies at the national and EU levels. To understand how the policy framework and policy tools work in the field of sustainable food consumption. To know about different food production. To be able to identify the main challenges in healthy food consumption. To be able to explain how organic food policies are implemented at the European Union and national level. To be able to name various stakeholders in the field of healthy food production and consumption. To be able to consider personal activity in the field of healthy food production and consumption. To be able to use critical thinking and critical media literacy in dealing with food consumption. To be able to advocate for innovative solutions in order to develop healthy food consumption.
Target Group -	Young People between 16 and 25 years old
Educational Approach	Young people will learn about the EU food consumption policies and will be able to critically monitor the implementation of healthy food consumption.
Link to School Curricula (if applicable)	
Facility/ Equipment	• Classroom • Internet access • Computer/laptop

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Tools/ Materials	• Markers • Pens • Paper sheets • Mobile phones
The main tasks	**1. <u>Did you know?</u>** The participants will be split into 3-4 groups, depending on how big the participant number is. They will be given the task to find an ideea for healthy food consumption. Each group will present their ideea and will advocate for it, trying to convince the other members of the other groups to join their group. The group with the most number of people in wins. Time needed: • 10 mins to come up with the ideea and how to present it • 15 mins to present • 5 mins to settle down for the winner group <u>Possible questions for debriefing:</u> 1. What did you do? 2. What types of healthy food did you find? 3. How did you work in your team? Did you have a strategy? Which one? 4. How did you feel doing this activity? 5. What have you learned? 2. **Let's see how It grows** The participants will be taken to a study visit to a farm or entity that grows healthy food in a sustainable way. This way they will be able to see for themselves how healthy ingredients can grow in their own climate and area. If agreed on, they can even plant certain plants, if both the weather and the farm allow it. <u>Possible questions for debriefing:</u> 1. How was it for you to be involved in such an activity? 2. What can we learn from this activity?
Module 2: Green living - adopting an eco-friendly lifestyle	
Topic 2: Compost and its benefits	

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Lesson Plan 2 – Compost and its benefits	
Duration: 40-50 minutes (indoor activities)	
Short Description of the Lesson	This lesson presents the basics of composting such as different methods to do it. The topic aims to inform the young people on how to do compost, what ingredients to pick and which type would be more suitable for them.
Learning Goals	To understand how to differentiate different types of composting. To realize everybody can do it at home. To be able to use the principles of composting in a practical way. To be able to present natural ways of composting to others. To be able to relate, use critical thinking when it comes to the process of composting and choosing the materials. To become motivated to suggest your surroundings to start the process.
Target Group -	Young People between 16 and 25 years old
Educational Approach	Young people will learn about the various techniques that can be helpful for composting and what ingredients are good for it.
Link to School Curricula (if applicable)	
Facility/ Equipment	● Classroom ● Sunny space
Tools/ Materials	● A wide-mouth glass jar ● Organic yard debris (such as fallen leaves, grass clippings, and dirt) ● Old newspaper ● Fruit and vegetable peels, cores, and scraps from the kitchen ● 1 cup rainwater ● A permanent marker
The main tasks	**Let's do It ourselves** This activity will be done individually. Each participant will need their own supplies and will learn how to do compost. They will first add the soil in the jar, followed by newspaper and scraps, topped with the yard debris. They will repeat the process until the jar is almost full. After that they will add the water to the jar and write their names on it. The jars will be all set in a sunny area and every two weeks they will check the level of compost by marking a sign on the jar with the marker. Time needed: 40 minutes for the preparation <u>Possible questions for debriefing:</u>

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	1. What is the type of composting that seems the most interesting to you? 2. What process seems the hardest? 3. Do you think you could start doing compost on your own or would you be considering doing it? 4. What have you learned from this activity?

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Module 2: Green living - adopting an eco-friendly lifestyle	
Topic 3: Green International Development Cooperation	
Lesson Plan 3 – Green International Development Cooperation	
Duration: 90 minutes - 45 minutes Indoor activities and 45 minutes outdoor activities	
Short Description of the Lesson	This topic is intended to introduce the topic of International Development Cooperation with focus on particular aspects of it- Official Development Assistance and green development and humanitarian activities as parts of it. The legal frameworks for EU and its member states in the field of international development cooperation will be presented. The international development cooperation is the legal obligation of all EU member states but it is important that there is bigger and greener EU international development cooperation. The focus will be also on the international development cooperation of the GreenAct partners' countries. The critical thinking and critical media literacy will be used in assessing the level and the impact of the EU international development cooperation and green examples of such cooperation will be actively sought in the field of environment.
Learning Goals	To know the basics of International Development Cooperation, how it came into being, how it developed and what it consists of. To know International Development Cooperation responsibilities of the EU and its member states. To know that different EU countries provide different quantity and quality of aid in international development cooperation To be able to recognize the difference between development and humanitarian cooperation To know how the main providers of international development cooperation operate To be able to describe international development cooperation legislation in the EU and its member states To be able to plan activities regarding the international development cooperation To become motivated to search for green international development cooperation that is beneficial for people and the planet. To become an activist in this field
Target Group -	Young People between 16 and 25 years old

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Educational Approach	Young people will learn about the EU's international development cooperation legal framework, institutions that deal with the subject and main goals of it.
Link to School Curricula (if applicable)	
Facility/ Equipment	● Classroom ● Internet access ● Projector ● Computer/laptop
Tools/ Materials	● Mobile phones ● Printed materials ● Markers ● Paper sheets
Main tasks	**1. Study visit** The participants will be taken to a study visit to one competent authority that works in a field related to general environmental legislation. They will be shown backstage" how a legislation process looks like and details on how to write one. **2. Can we do it too?** After the study visit the participants will be split into 5 groups. Each group will try to write a legislation proposal based on the study visit they participated in. At the end, each group will present their proposals and the others will vote on whether they would approve it or not. Time needed: -30 mins to write the proposal briefly -15 to present it very shortly Possible questions for debriefing: ● How did you feel during this activity? ● What have you learned? ● What section seems doable for you?

Module 2: Green living - adopting an eco-friendly lifestyle
Topic 4: Buying smart
Lesson Plan 4 – Buying smart
Duration: 45 minutes of Indoor activities

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Short Description of the Lesson	This topic mainly reflects consumerism, what is consumerism and how people can buy smart. By giving examples of what people can do at home, they can also understand their impact on consumerism and on the environment.
Learning Goals	To understand the role of consumerism in modern life and how to buy "smart". To understand the role of society and political leaders in finding alternatives to consumerism implementation of agreements. To be able to use critical thinking and critical media literacy To be able to explain the goals of the civil society organisations which want to make the shift away from consumerism To turn into an activist to play personal part to change the situation To be prepared to pressure governments to transition to sustainable industries
Target Group -	Young People between 16 and 25 years old
Educational Approach	Young people will get a better understanding of the challenges modern industries pose to workers' rights and environment. They will understand that transition to sustainable industries helps preserve the environment, as well as being able to make "smart" purchases. .
Link to School Curricula (if applicable)	
Facility/ Equipment	• Classroom • Internet access • Computer/laptop • Flipchart
Tools/ Materials	• Pens/markers • Mobile phones • Paper sheets
Main tasks	**How does It grow?** The participants will be split into 5 groups. Each group will get a certain type of plant that can be grown at home. They will all have to make a poster presenting the evolution of the plant, the needed materials and the environment it needs to be kept in. Time needed: -30 mins to prepare -15 mins to present <u>Possible questions for the debriefing:</u>

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	● How did you feel during this activity? ● What have you learned? ● What action can you take in your daily life in order to reduce your own “consumerism”?

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Module 2: Green living - adopting an eco-friendly lifestyle	
Topic 5: Green ways of transport	
Lesson Plan 5 – Green ways of transport	
Duration: 45 minutes of Indoor activity	
Short Description of the Lesson	This lesson targets mainly the idea of examples of good green and sustainable ways of transportation. The participants will be shown different methods and will be presented the impact that transportation process has on the general level of pollution and air quality.
Learning Goals	To know sustainable ways of transportation To know the various effects that transportation has on the overall pollution level on a global level. To recognize the importance of shared transportation. To be able to give examples of good practices in the field of sustainable transportation To know how to motivate others into using public transportation or walking, if it's the case. To be empowered to find solutions and to get together with people with similar ideas.
Target Group -	Young People between 16 and 25 years old
Educational Approach	Young people will get the first experience of one of the eco-friendly ways of transportation in more depth
Link to School Curricula (if applicable)	
Facility/ Equipment	● Classroom ● Internet access ● Computer/laptop ● Mobile phones
Tools/ Materials	● Pens ● Markers ● Flipchart paper ● Paper sheets
Main tasks	1. **Let's move!** The participants will be asked to switch to public ways of transportation for a week while going to school or any other places. They will have to note down if the public transport is inaccessible for them, if it is too over-crowded at the time they are using it and all details that might seem

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	relevant. After they do the small research, they will be split into groups based on the criteria of using the same route and will be asked to share and compare their results. After analysing all the results, they will try to come with solutions on how to decongest traffic, or how to make it more accessible and better for them in order to use it daily. Time needed: • 5 minutes to gather the groups • 30 minutes to discuss in the groups • 10 minutes to present their conclusions <u>Possible questions for debriefing:</u> • How was the experience for you? • Did you manage to switch from personal vehicles to public transport? Was this a hard change for you? • Are you considering using public transport more? • How did this experience make you feel? • Is there anything missing from your public transport system that you consider should be available?

Module 2: Green living - adopting an eco-friendly lifestyle	
Topic 6: Examples of good practices	
Lesson Plan 6 – Presentation of good practices	
Duration: 45 minutes of Indoor activities	
Short Description of the Lesson	This topic targets mainly the idea of examples of good practices. The participants will be shown different approaches on how to adopt a more eco-friendlier lifestyle through examples of what other people have already done.
Learning Goals	To know good practices in having a green lifestyle. To recognize the importance of practical results. To be able to give examples of good practices. To be motivated to take responsibility and act for your health. To see the value of green living and having an eco-friendlier lifestyle. To become inspired by the activity of volunteers or other NGOs and entities.

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	To be empowered to find solutions and to get together with people with similar ideas.
Target Group -	Young People between 16 and 25 years old
Educational Approach	Young people will get the first experience of one of the methods/techniques of green living
Link to School Curricula (if applicable)	
Facility/ Equipment	● Classroom ● Internet ● Computer/laptop ● Mobile phones
Tools/ Materials	● Music
Main tasks	**Who did it before?** Participants will be asked to form a line. The facilitator will read eco-friendly change statements out loud such as „i could use toothpaste tablets instead of toothpaste coming from a tube" or „i could get a reusable water bottle and fill it up instead of always buying single use plastic ones" and so on. The participants will be asked to take a step forward if they believe they can do the said changes. At the end we can tell how easy it might seem for others to be eco-friendly and how hard it would be for some. Discussions can be done after if the participants have any questions. Time needed: ● 20-30 minutes for implementing the activity ● 10-15 minutes debriefing <u>Possible questions for debriefing:</u> 1. How did you feel while implementing the activity? 2. What have you learned from this activity? 3. Do you consider yourself different from the others based on your choices?

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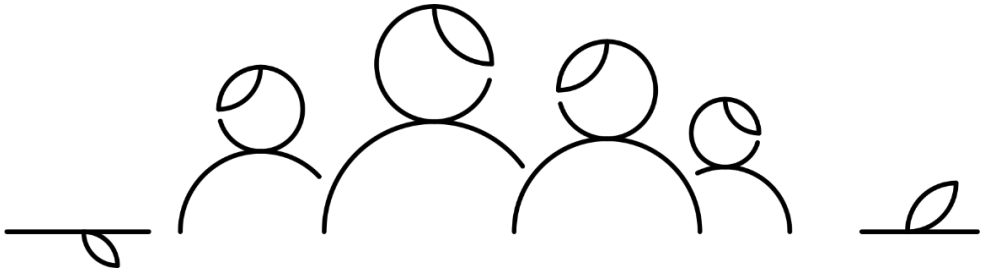

LESSON PLANS FOR YOUTH WORKERS

Project number: 2020-3-RO01-KA205-094853

MODULE 3: Sustainable communities - Eco-cities

Association WalkTogether

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Project Information

PROJECT: GreenACT

PROJECT TITLE: Youth 'agents of change' on Climate Action and Environmental Sustainability

ACRONYM: GreenACT

PROJECT WEBSITE: https://greenactproject.eu/

PROJECT NO.: 2020-3-RO01-KA205-094853

PROJECT COORDINATOR: ASOCIAȚIA D.G.T

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Module 3: Sustainable communities - Eco-cities	
Topic: Eco-innovation & Entrepreneurship	
Lesson Plan 1 Watching educational videos- 10 minutes Discussion on the eco-innovative products they have seen in their cities- 20 min Brainstorming new eco-innovations, divided in groups- 40 min Presentation of what the participants have thought about- 20 min	
Duration: 90 minutes - 1h and 30 min	
Short Description of the Lesson	The lesson will begin with educational videos on eco innovations, which will introduce the topic to the participants. Their learning process will be further encouraged by a discussion, in which participants can share what eco-innovations are currently being implemented by their cities. The discussion will engage and ease their creative thinking, which will be needed for the next part of the lesson. Divided in groups of at least 3-4, participants will have to brainstorm new ecological innovations that can be implemented in their cities. They will have to create an executive plan about how/where they will create their products, how it will be distributed, why the product is beneficial and what are the challenges currently not allowing this product to be already in exploitation. They will use flip-chart paper to write/draw down all the above-mentioned details regarding their innovation. After the time is up, the participants will have to present their results in front of the whole groups and receive feedback.
Learning Goals:	The learners understand what eco-innovations are The learners understand how beneficial sustainable products are. The learners understand how tiny plastic products have large impact on the planet. The learners understand their impact as a customer.
Target Group -	16 -25 / youth workers
Educational Approach	Brainstorming, Teamwork, Video materials According to the opinion of the facilitator, it is recommended to add an at least 5-minute-long energizer to each lesson.
Link to School Curricula (if applicable)	
Facility/ Equipment	Internet, Multimedia, Projector, Flip-chart paper, Colourful markers

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Tools/ Materials	Video 1- https://www.youtube.com/watch?v=6L_ipFvVtWE&t=1s Video 2- https://www.youtube.com/watch?v=li0EpfSbOJg
The main tasks	• Watching educational videos- 10 minutes • Discussion on the eco-innovative products they have seen in their cities- 20 min • Brainstorming new eco-innovations, divided into groups- 40 min • Presentation of what the participants have thought about- 20 min

Module 3: Sustainable communities - Eco-cities

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Topic: Sustainable Urban Development	
Lesson Plan 2 Article reading- 10 minutes Watching a video- 10 minutes Teamwork- 50 minutes Presentation of the final products- 20 minutes	
Duration: 1h and 30 minutes	
Short Description of the Lesson	The lesson begins with the introduction of the topic with the help of educational materials- an article and a video about sustainable cities. This will give clarity to the participants regarding their tasks during the session. After they have finished watching the video and reading the article, they will be divided in three groups- information collectors, poster creators, brochure designers and flyer creators. Each group should contain minimum 4 participants. The information collectors will have to structure the most important information about the good practices gathered from the video and the article (ex. Riding a bicycle instead of driving, building with solar panels, etc.). They will have 15 minutes to finish their part. The structured information should then be passed to the designers. Each designer team should create at least 2 products in correspondence to their teams' names (posters, flyers, brochures). The products must contain the condensed information, provided by the information collectors. The designers can use Canva, as it is a free software. They will have 35 minutes to finish their products. After that the products will be presented to everyone and shared on the official social media channels of the greenACT project.
Learning Goals	The aim of the module is to define the term "Sustainable Urban Development" and encourage learners to brainstorm of new practices, which can help their cities reach a higher level of sustainable urban development. The learners understand what Sustainable Urban Development is. The learners understand how beneficial it is for their health. The users can advocate for new sustainable urban units in the city they live in. The users can explain to other why developing urban sustainability is necessary.
Target Group -	16 -25 / youth workers

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Educational Approach	Enhancing digital and information evaluation skills, Brainstorming, Teamwork, Video materials According to the opinion of the facilitator, it is recommended to add an at least 5-minute-long energizer to each lesson.
Link to School Curricula (if applicable)	
Facility/ Equipment	Internet, Multimedia, Projector, at least 2 laptops per team with internet access
Tools/ Materials	Article 1- 6 Traits of a Sustainable City- https://www.digi.com/blog/post/sustainable-city Video 1- https://www.youtube.com/watch?v=fsWr0LfM_uQ&ab_channel=GoingGreen
The main tasks	• Article reading- 10 minutes • Watching a video- 10 minutes • Teamwork- 50 minutes • Presentation of the final products- 20 minutes

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Module 3: Sustainable communities - Eco-cities	
Topic: Alternative Transportation (emissions-free/electric vehicles and public transportation, alternative ways of transportation	
Lesson Plan 3 Video materials watching- 10 minutes Creating PPTs- 25 minutes Presenting of individual presentations- 25-30 minutes	
Duration: approx. 60 minutes	
Short Description of the Lesson	The lesson will begin with educational videos on alternative ways of transportation. After the participants are more familiar with the topic, divided in national groups, they will have to create a short PowerPoint presentation of the alternative ways of transportation, which are popular in their countries. After that, the participants will have to present to their peers the different alternative transportation means in their countries. Each group should be given around 5 minutes for their presentation. Once all groups have presented, the groups altogether will have to decide in which country the alternative transportation vehicles are the most popular.
Learning Goals	To specify why sustainable transportation should be chosen rather than using a car. The learners understand the environmental concerns that come from modern transportation means. The learners understand how to critically evaluate different transportation options. The users can research into alternative transportation means. The users can make critical decisions and choose the most environmentally friendly transportation system.
Target Group -	16 -25 / youth workers
Educational Approach	Enhancing digital and presentation skills, Brainstorming, Teamwork, Working with video materials According to the opinion of the facilitator, it is recommended to add an at least 5-minute-long energizer to each lesson
Link to School Curricula (if applicable)	
Facility/ Equipment	Internet, Multimedia, Projector, at least 1 laptop per team
Tools/ Materials	Video 1 - https://www.youtube.com/watch?v=VJXXVnUE1Ts&ab_channel=EcoMasteryProject

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Main tasks	• Video materials watching- 10 minutes • Creating PPTs- 25 minutes • Presenting of individual presentations- 25-30 minutes

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Topic: Waste Management and the 5R's	
Lesson Plan 4 Introduction to the topic with an article- 5 minutes Introduction to the video task- 10 minutes Planning, filming, editing- 1h and 40 minutes Presentation of the video- 15 minutes	
Duration: 2h and 10 minutes	
Short Description of the Lesson	The lesson will begin with the introduction of the topic with the help of an article. Once the students are introduced to it, they will be given their assignment. Their task will be to create a 3–4-minute video on the 5R's and how they can be implemented in their cities.
Learning Goals	Learning Goals Create a visual material, which can be distributed and help viewers towards turning their towns into more eco-sustainable ones. Teaching learners how to reduce their plastic consumption, suggest new ways for repurposing used plastic containers and encourage the integration of the 5R's in the learners' everyday lives.
Target Group -	16 -25 / youth workers
Educational Approach	
Link to School Curricula (if applicable)	
Facility/ Equipment	The activity can be done outdoors. A camera and laptop for editing will be needed
Tools/ Materials	Article- https://galleryclimatecoalition.org/news/60-what-are-the-5-rs-of-the-waste/
Main tasks	• Introduction to the topic with an article- 5 minutes • Introduction to the video task- 10 minutes • Planning, filming, editing- 1h and 40 minutes • Presentation of the video- 15 minutes

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Module 3: Sustainable communities - Eco-cities	
Topic: Good Practices in the field of Green Cities	
Lesson Plan 5 Lesson Plan Learning about sustainable Green Cities and how they have applied the concept of Eco - cities. - 30 min Creating a plan about your city - 60 min	
Duration: 90 min	
Short Description of the Lesson	There are several ways to define "good practices." However, a theme that runs across most definitions is that they all refer to tactics, methods, and/or activities that have been demonstrated via study and assessment to be reliable in producing the intended results and to be successful, efficient, sustainable, and/or transferrable.
Learning Goals	Learning about sustainable Green cities
Target Group -	16 -25 / youth workers
Educational Approach	
Link to School Curricula (if applicable)	
Facility/ Equipment	The Activity requires multimedia, flipchart, and markers.
Tools/ Materials	https://ec.europa.eu/migrant-integration/page/what-are-good-practices_en#:~:text='Good%20practices'%20can%20be%20defined,lead%20to%20a%20desired%20result
Main tasks	• Learning about sustainable Green Cities and how they have applied the concept of Eco - cities. - 30 min • Creating a plan about your city - 60 min

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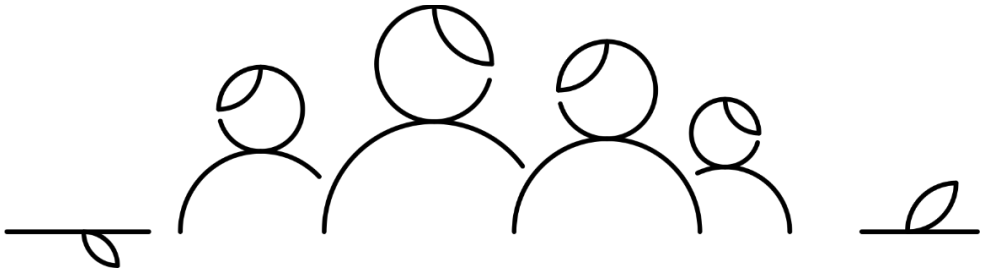

LESSON PLANS FOR YOUTH WORKERS

Project number: 2020-3-RO01-KA205-094853

MODULE 4: Green act movement: become an active agent for the environment

BRIGADA DO MAR

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Project Information

PROJECT: GreenACT

PROJECT TITLE: Youth 'agents of change' on Climate Action and Environmental Sustainability

ACRONYM: GreenACT

PROJECT WEBSITE: https://greenactproject.eu/

PROJECT NO.: 2020-3-RO01-KA205-094853

PROJECT COORDINATOR: BRIGADA DO MAR - UNIÃO

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Module 4: Green act movement: become an active agent for the environment	
Topic 1: Community initiative and action	
Lesson Plan 1 – Clean-up campaign	
Duration: 105 minutes (45 minutes for the indoor session and 60 minutes for the outdoor session)	
Short Description of the Lesson:	The aim of the lesson is to raise awareness for environmental issues by demonstrating that public actions, even individuals, can have a great impact on environmental protection. The indoor part focuses on brainstorming among youngsters on what is necessary to take into consideration when creating a clean-up campaign. On the outdoor part, participants will have the opportunity to take part in a campaign, understand how it is being implemented and realise its impact.
Learning Goals:	• To demonstrate the importance of public initiatives; • To motivate people to become active agents for the environment; • To inform other people about the matter; • To be motivated to become active and develop/support initiatives that help the environment.
Target Group:	Youth between 16 and 25 years old
Educational Approach:	This will be implemented using non-formal and challenge-by-choice methods.
Link to School Curricula (if applicable):	
Facility/ Equipment:	• Classroom • Internet access • Computer & Projector • Area with a trash problem • Trash bins close to the chosen area
Tools/ Materials:	• Gloves • Plastic bags • Trash pickers (optional) • Casual clothes, closed feet shoes, hat and sunscreen • Hand weight scale (optional) • Trash bins (in case there aren't in the place) • Computer with internet access • Paper sheets • Pens & markers
Main tasks indoor:	1. Introduce the participants to the activity (3 minutes);

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	2. Split the group into smaller working groups (3 to 5 people) and invite them to brainstorm on how to create a clean-up campaign (1 minute); 3. Based on the group, facilitators decide on how and how much information and tips (consult handbook) they give beforehand (1 minute); 4. Let participants discuss in groups (20 minutes); 5. Gather the group together and invite each working group to present their insights and conclusions (10 minutes); 6. Conduct an open discussion to summarise the most important aspects of each step of a clean-up campaign, in a debriefing section (10 minutes).
Main tasks outdoor:	1. Gather the group together and make a briefing of the clean-up campaign (1 minute); 2. Inform the participants about the process while sharing with them necessary equipment (gloves, bags, etc.) (4 minutes); 3. Facilitate the clean-up campaign (30 minutes); 4. Measure and analyse the trash collected (15 minutes); 5. Finish the activity with a debriefing section emphasising for its importance and main steps of implementation (10 minutes). Consult page 5 of the Handbook for more information.

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Module 4: Green act movement: become an active agent for the environment	
Topic 2: NGOs' climate action	
Lesson Plan 2 – Let's quiz it!	
Duration: 80 minutes indoors.	
Short Description of the Lesson:	The lesson aims to raise awareness of climate change and the actions being taken by NGOs. The quiz will give a general idea of how youngsters understand climate change and, after having a clear view of the situation, discuss different NGOs' actions in combating the problem that they know within their community and internationally.
Learning Goals:	• To demonstrate the importance of public initiatives; • To motivate people to become active agents for the environment; • To inform other people about the matter; • To be motivated to become active and develop/support initiatives that help the environment
Target Group:	Youth between 16 and 25 years old
Educational Approach:	This will be implemented using non-formal methods. The theoretical part will be accompanied by a ppt presentation.
Link to School Curricula (if applicable):	
Facility/ Equipment:	• Classroom • Internet access • Computer & Projector
Tools/ Materials:	• Paper sheets • Worksheet 1 - Quiz • Pens • Markers
Main tasks:	1. Introduce the participants to the activity and the main subject of climate change, telling them that the quiz is about the causes for climate change in order to make them understand what an NGO is and what it can do to fight the problem (8 minutes); 2. Try to understand if they are aware of the main terms related to the topic and whether or not they know what an NGO is. Use the definitions provided in the handbook and briefly clarify them (2 minutes); 3. Share the following quiz with the participants, printed or digitally, and invite them to fill it (15 minutes):

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Module 4: Green act movement: become an active agent for the environment	
	- https://docs.google.com/document/d/1A0sscbR30DzeTGfkdFkgixmfOQ6Dd82tQFcaBt0mtnA/edit 4. Facilitate an open discussion on the questions without giving them the answers right way (5 minutes); 5. If the facilitator, from the results of the quiz, sees that most of the participants don't have a clear view of the subject, the additional resources on the handbook can be used; 6. Then, invite the whole group to split into groups of 3-4 people and leave them to discuss any action fighting climate change that they are aware of, and on any NGO they might know in their community/country (10 minutes); 7. Bring back the participants to the whole group and invite them to highlight some of the NGOs they discussed (15 minutes); 8. Finish the activity with a debriefing (10 minutes). 9. You can find possible questions in the handbook, on page 10.

Module 4: Green Act Movement: become an active agent for the environment
Topic 3: Community environmental awareness
Lesson Plan 3 – Communicating for Change

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Duration: 90 minutes indoors.		
Short Description of the Lesson:		The aim of the lesson is to develop the youngsters' capacity to engage with the general public regarding environmental action and climate change.
Learning Goals:		● To stimulate communication skills; ● To stimulate creativity; ● To develop the capacity to inform and debate ideas; ● To motivate people to become active agents for the environment; ● To educate people about the subject; ● To stimulate active citizenship.
Target Group:		Youth between 16 and 25 years old
Educational Approach:		This will be implemented using non-formal methods. The theoretical part will be supported by a ppt presentation.
Link to School Curricula (if applicable):		
Facility/ Equipment:		● Classroom ● Internet access
Tools/ Materials:		● Old cardboard; ● Laptop; ● Markers.
Main Tasks:		1. Welcoming and introductions - 5 minutes 2. Energizer - 5 minutes 3. Lecture on what is a communication action - 20 minutes Ask them what communication tools they know and which ones are more effective. Encourage participants to share examples of communication tools. If few people are proposing ideas, feel free to list some and encourage everyone to say two different others.. 4. Small group work - 20 minutes Divide the participants into small groups and assign each of them with the preparation of a communication action to raise environmental awareness. Each pair should have two or three different alternatives that they can name. 5. Presentation of results - 15 minutes Ask each group to briefly talk about the 2 or 3 communication actions.

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		After all the group presentations, take a break and present the next section. 6. Break - 5 minutes 7. Group Discussion - 15 minutes Discuss the challenges of implementing each communication action. Ask participants to share examples of obstacles in the fight against environmental problems. Give everyone the opportunity to say what they think. 8. Reflection and evaluation/Feedback - 10 minutes You can find more information on page 11 of the Handbook of the module.

Module 4: Green Act Movement: become an active agent for the environment
Topic 4: Sponsorship and Funding
Lesson Plan 4 – An action for CHANGE
Duration: 80 minutes indoors.

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Short Description of the Lesson:		The aim of the lesson is to develop the youngsters' capacity to understand how funding and sponsoring can help in fighting climate change.
Learning Goals:		• To discover methods of funding NGO's activities through public and private entities; • To stimulate communication skills; • To stimulate empathy and understanding; • To motivate people to become active agents for the environment; • To educate people about the subject; • To stimulate active citizenship.
Target Group:		Youth between 16 and 25 years old
Educational Approach:		This will be implemented using non-formal education methods.
Link to School Curricula (if applicable):		
Facility/ Equipment:		• Classroom • Internet access
Tools/ Materials:		• Flipchart; • Laptop; • Markers.
Main tasks:		1. Welcoming and introductions - 5 minutes 2. Lecture on how sponsoring and funding can help fight climate change - 30 minutes Ask them what companies can do to help fight climate change. Encourage participants to share examples of sponsoring and funding in the fight against climate change. If few people are proposing ideas, feel free to list some and encourage everyone to say two different others. 3. Small group work - 20 minutes Divide the participants into small groups and assign each of them the preparation of an action to help fight climate change with a fixed budget. Each pair should have at least one alternative. 4. Presentation of results - 15 minutes Ask each group to talk about their proposals briefly. 5. Reflection and evaluation/Feedback - 10 minutes

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		Consult page 13 of the Handbook for more information.

Module 4: Green act movement: become an active agent for the environment
Topic 5: Corporate Social Responsibility

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Lesson Plan 5 – Study Visit to a Corporation with CSR initiatives	
Duration: 150 minutes (indoor or outdoor visit)	
Short Description of the Lesson:	The aim of this lesson is for students/young people to discover and study cases of Corporate Social Responsibility initiatives that are already taking place in companies at a local level, to understand how they are structured and operating in an enterprise environment.
Learning Goals:	Develop a Corporate Social Responsibility; To become aware of the CSR initiatives; • To learn about CSR principles; • To identify sustainability opportunities in business operations; • To understand its importance and role in green movements; • Understand how corporate initiatives have a social impact; • To learn about the benefits of CSR initiatives for companies and employees.
Target Group:	Youth between 16 and 25 years old (in an educational context), Youth Workers (in a non-formal context)
Educational Approach:	This will be implemented using the non-classroom method.. The activity should be decided by a Professor or Youth Worker that needs to do a plan for the Study Visit. The students will learn, before the visit (or even in the first part of the visit in a meeting room, e.g.), the CSR initiatives of the organisation they will visit, in order to think about suggestions for improvements and new ideas for the CSR Department they are visiting. Afterwards, they will have a moment with company staff to sketch ideas or suggestions for their initiatives.
Link to School Curricula (if applicable):	N/A
Facility/ Equipment:	• A room to Design the CSR Initiatives Proposal
Tools/ Materials:	• Internet access • Projector • Pen and Paper
Main Tasks:	1. Introduction upon the visit (30min); - Clarifying briefly what is CSR (Professor or Youth Worker) (5m); - Watch a video of a CSR practice example (10 min); - Presentation to the students of the CSR Initiative implemented/developed by the organisation they will visit (15m); 2. In the visit: (110m)

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	- Visit the CSR department of the organisation and get to know the initiatives (70m); - Break (10m); - Participants are invited to present their suggestions of improvement of current CSR initiatives of the organisation visiting and give other ideas to the e CSR department responsible (30m); 3. Debriefing about the visit (10min). 4. Please find more information on page 15 of the handbook.

Module 4: Green act movement: become an active agent for the environment
Topic 6: Examples of good practices
Lesson Plan 6 – Presentation of good practices that help inspire people to become active agents for the environment
Duration: 80 minutes indoors.

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Module 4: Green act movement: become an active agent for the environment	
Short Description of the Lesson:	The lesson aims to show examples of good practices and inspiring examples carried out on personal, local, national, European or International levels on the different topics above, aiming to motivate and inspire people to be part of the change and fight for the future of life on the planet.
Learning Goals:	• To recognise a good example and fill inspired by it; • To understand the importance of these good practices and initiatives; • To contribute/create an inspiring movement for the planet; • To feel ready to implement and/or contribute to good practice.
Target Group:	Youth between 16 and 25 years old
Educational Approach:	This will be implemented using non-formal methods, with the support of a ppt presentation.
Link to School Curricula (if applicable):	
Facility/ Equipment:	• Classroom • Internet access • Computer & Projector
Tools/ Materials:	• Computer & Projector
Main tasks:	1. Introduce the participants to the activity and the main subject of the project behind (10min); 2. Start a short presentation, based on the handbook document (page 19) and the PowerPoint presentation, with several examples of good practices at different levels. Support the presentation with an exhibition of short videos (in the handbook) (45min); 3. Gather participants for an open discussion about what they have seen (15min); 4. Finish the activity with a debriefing. You can find possible questions in the handbook (10min).

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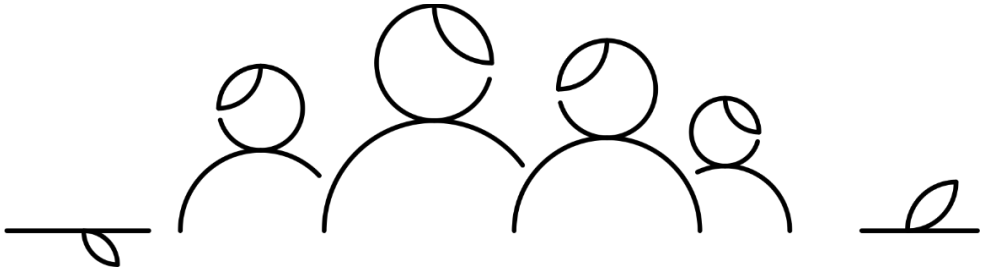

LESSON PLANS FOR YOUTH WORKERS

Project number: 2020-3-RO01-KA205-094853

MODULE 5: European Union and National Environmental Policies

TAVO EUROPA

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Project Information

PROJECT: GreenACT

PROJECT TITLE: Youth 'agents of change' on Climate Action and Environmental Sustainability

ACRONYM: GreenACT

PROJECT WEBSITE: https://greenactproject.eu/

PROJECT NO.: 2020-3-RO01-KA205-094853

PROJECT COORDINATOR: ASOCIATIA D.G.T

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Module 5: EU and National Environmental Policies	
Topic 1: Environmental protection policies	
Lesson Plan 1 – 1) Presentation on the main goals of the environmental protection policies at the EU and national level 2) Group task for environmental reflections	
Duration: 90 minutes (30 minutes indoor activities and 60 minutes outdoor activities)	
Short Description of the Lesson	This topic focuses on environmental protection policies at the national and international levels. The policy framework, environmental management tools and procedures, government-backed ideas, and actions are presented. Protection policy is seen as the basis for implementing various initiatives and ensuring successful environmental protection.
Learning Goals: **1.** To know the environmental protection policies at the national and EU levels. **2.** To understand how the main environmental management tools and procedures work. **3.** To know about different policies. **4.** To be able to identify the main challenges in environmental protection. **5.** To be able to explain how environmental protection policies are managed at the European Union and national level. **6.** To be able to name different institutions and their responsibilities. **7.** To be able to consider personal activity in the environmental field. **8.** To be able to critically respond to public information regarding environmental issues. **9.** To be able to propose solutions for short-term or long-term issues.	
Target Group Youth Workers between 16 and 25 years old	
Educational Approach Youth workers will learn about the EU-wide environmental protection policy and will be encouraged to reflect on the environment around them.	
Link to School Curricula (if applicable)	
Facility/ Equipment	● Classroom ● Internet access ● Projector ● Flipchart
Tools/ Materials	● Markers ● Pens ● Paper sheets
Main tasks	1. Introduce the concept of environmental protection. This is the practice of protecting the natural environment by individuals, organizations and governments. Its objectives are to conserve natural resources and the existing natural environment and, where possible, to repair damage and reverse trends. 2. Using the handbook, present the goals that EU countries consider important for environmental protection.

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	3. Show a short video "Q&A on environmental protection and climate policy - EU explained" https://www.youtube.com/watch?v=0qcnzKTSQ50 4. After dividing the participants into groups of 3-4 people, present the task to them - to identify a noticeable problem related to environmental protection after assessing the immediate environment and propose possible solutions. Ensure participants have 30 minutes for environmental observation and 30 minutes for group discussion to brainstorm possible solutions. 5. Spend 10-15 minutes discussing the lesson in a group.

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Module 5: EU and National Environmental Policies	
Topic 2: Environmental governance	
Lesson Plan 2 – 1) Presentation on environmental governance and assessment framework 2) Group discussion on EU member states environmental governance	
Duration: 30 minutes (indoor activities)	
Short Description of the Lesson	This topic presents the existing institutions and the main political positions responsible for environmental issues. The interaction and accountability of the European Union and national governments is revealed. The main directions of activities and implementation of tasks are distinguished.

Learning Goals:

1. To understand how to generalize the work of environmental governance at the EU and national level.
2. To know how identify the main political positions responsible for environmental protection.
3. To understand different institutions and their responsibilities.
4. To be able to describe different governance levels and their tasks.
5. To be able to adapt the knowledge to concrete issues.
6. To know who to contact in case of any issue.
7. To be able to present proposals to responsible institutions and leaders.
8. To be able to relate actions to government activity.
9. To become motivated to assist political leaders in case of any issue regarding the environment.

Target Group Youth Workers between 16 and 25 years old

Educational Approach Youth workers will learn about the guidelines of the environmental governance and assessment system in the European Union and will be able to assess the situation of their country at the international level.

Link to School Curricula (if applicable)	
Facility/ Equipment	● Classroom ● Internet access ● Projector ● Flipchart
Tools/ Materials	● Laptops/mobile phones ● Markers ● Paper sheets
Main tasks	1. Introduce the concept of environmental governance. Environmental governance includes policy, rules and norms that govern human behavior and it also addresses who makes decisions, how decisions are made and carried out, the scientific information needed for decision-making and how the public and major stakeholders can participate in the decision-making. 2. Using the handbook and slides, present the theoretical material of the lesson about the responsibilities of the European Commission.

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	3. Introduce the participants to the Development of an assessment framework on environmental governance in the EU Member States - 2019 report. 4. Give participants a task to review the report and gather information about their country. 5. Moderate the participants' discussion about the situation of the countries in the context of the EU - the main trends and the main challenges. 6. Spend 10-15 minutes discussing the lesson in a group.

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Module: EU and National Environmental Policies	
Topic 3: Environmental laws, policies, and legislation	
Lesson Plan 3 – 1) Presentation on environmental legislation, regulatory framework and authorities 2) Online workshop on EU environmental law	
Duration: 90 minutes (60 minutes indoor activities and 30 minutes outdoor activities)	
Short Description of the Lesson	This topic is intended to introduce the legal framework. It presents legislation that is generally applicable in all countries of the European Union. An overview of their compliance at national level is provided, with a brief overview of the content of the main legal instruments in the field of environment.
Learning Goals: **1.** To know the basic laws of the environment. **2.** To know what responsibilities, belong to the EU and national institutions. **3.** To know that some laws differ depending on the area. **4.** To be able to differ between international and national legislation. **5.** To know how the main legal instruments work. **6.** To be able to describe environmental legislation in the EU. **7.** To be able to plan activities regarding the EU and national legislation. **8.** To become motivated to use legal instruments in case of need. **9.** To see for a value in environmental legislation.	
Target Group Youth Workers between 16 and 25 years old	
Educational Approach Youth workers will learn about the EU's environmental legal framework, regulatory mechanisms and main goals, and will participate in a workshop on environmental law at the EU level.	
Link to School Curricula (if applicable)	
Facility/ Equipment	● Classroom ● Internet access ● Projector ● Flipchart
Tools/ Materials	● Laptops/mobile phones ● Markers ● Paper sheets
Main tasks	1. Introduce The Single European Act of 1987. The Act introduced a new 'Environment Title', which provided the first legal basis for a common environmental policy with the aims of preserving the quality of the environment, protecting human health, and ensuring rational use of natural resources. 2. Using the handbook and slides, present the environmental action program initiated and implemented by the EU and the structure of EU legislation and regulatory authorities. 3. Present the YouTube channel Youth and Environment Europe". 4. Invite participants to an online workshop „Environmental law 101", https://www.youtube.com/watch?v=JEcOrdhTiJo .

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	5. Spend 10-15 minutes discussing the lesson in a group.

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Module: EU and National Environmental Policies	
Topic 4: European/ International Environmental Agreements and Goals	
Lesson Plan 4 – 1) Presentation on EU and UN environmental agreements and citizens' role in reaching the goals	
Duration: 60 minutes of indoor activities	
Short Description of the Lesson	This topic presents the main agreements and goals applicable to the countries of the European Union. The Green Deal, Sustainable Development Goals (SDGs), and their implementation in different countries will be presented. The content of the agreements, the objectives set, and the key issues are presented. The influence of governments and societies in the implementation of environmental programs is revealed.
Learning Goals: **1.** To know the main international environmental agreements. **2.** To understand the basic environmental goals of the EU. **3.** To understand the role of society and political leaders in the implementation of agreements. **4.** To be able to describe the idea of the Green Deal. **5.** To be able to present Sustainable Development Goals. **6.** To be able to explain the goals of the main environmental agreements. **7.** To feel motivated to play personal part in an implementation of international agreements. **8.** To see for a value in common EU deals. **9.** To be prepared to pressure governments to follow the agreements.	
Target Group Youth Workers between 16 and 25 years old	
Educational Approach Youth workers will get to know the EU Green deal and the UN SDGs, learn the main priorities and challenges of the programs and gain an understanding of the contribution of citizens to the observance of environmental agreements.	
Link to School Curricula (if applicable)	
Facility/ Equipment	● Classroom ● Internet access ● Projector ● Flipchart
Tools/ Materials	● Pens ● Markers ● Paper sheets
Main tasks	1. Introduce The European Green Deal. It presents a roadmap for making the EU's economy sustainable by turning climate and environmental challenges into opportunities across all policy areas and making the transition just and inclusive for all. The European Green Deal aims to boost the efficient use of resources by moving to a clean, circular economy and stop climate change, revert biodiversity loss and cut pollution. It outlines investments needed and financing tools available, and explains how to ensure a just and inclusive transition. The

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	European Green Deal covers all sectors of the economy, notably transport, energy, agriculture, buildings, and industries such as steel, cement, ICT, textiles and chemicals. 2. Introduce The Sustainable Development Goals (SDGs). SDGs, also known as the Global Goals, were adopted by the United Nations in 2015 as a universal call to action to end poverty, protect the planet, and ensure that by 2030 all people enjoy peace and prosperity. 3. Show the short video "The European Union's Green Deal, Explained", https://www.youtube.com/watch?v=gShVdPOp1D4 . 4. Using the handbook and slides, explain the European Green Deal priority objectives and the main implementation challenges. 5. Show the short video „Sustainable Development Goals explained with 3 useful tips | Environment SDG Sustainability", https://www.youtube.com/watch?v=qfOgdj4Okdw . 6. Using the handbook and slides, present the priorities of the United Nations and the main challenges in achieving the goals. 7. Together with the participants, discuss citizens' role in environmental agreements. 8. Spend 10-15 minutes discussing the lesson in a group.

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Module: EU and National Environmental Policies	
Topic 5: Examples of good practices	
Lesson Plan 5 – 1) Visit to the local institution/innitiative	
Duration: 120 minutes of outdoor activities	
Short Description of the Lesson	This topic includes good examples in the framework of the environmental theme. Initiatives to improve environmental protection, change and relevance are presented. The topic reviews practices initiated and supported by both governments and societies. It gives an impression of what any EU citizen can do.

Learning Goals:

1. To know good practices in environmental protection in my country and abroad.
2. To know how to explain the main steps of the implementation of the different initiatives.
3. To understand the value of good practices.
4. To be able to give examples of good practices.
5. To know how to organize environmental protection events.
6. To know what can be done by society and political leaders.
7. To be motivated to take responsibility and act.
8. To see the value of personal activity.
9. To become inspired by the activity of other societies and governments.
10. To be ready to propose solutions and coordinate with a group of people with similar ideas.

Target Group Youth Workers between 16 and 25 years old

Educational Approach Youth workers will get to know local environmental initiatives and institutions, learn about their activities and opportunities to join.

Link to School Curricula (if applicable)	
Facility/ Equipment	● N/A
Tools/ Materials	● N/A
Main tasks	1. Do research on institutions and organizations of environmental initiatives operating in your area and arrange a visit. 2. Allow 10-15 minutes to discuss the visit as a group.

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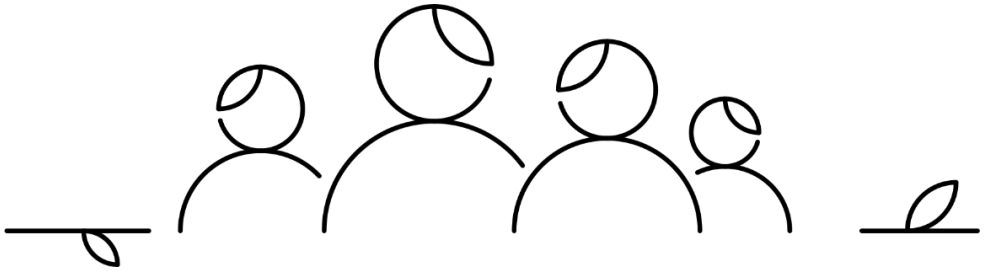

LESSON PLANS FOR YOUTH WORKERS

Project number: 2020-3-RO01-KA205-094853

MODULE 6: CLIMATE CHANGE

EMPHASYS CENTRE

greenACT

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Project Information

PROJECT: greenACT

PROJECT TITLE: Youth 'agents of change' on Climate Action and Environmental Sustainability

ACRONYM: greenACT

PROJECT WEBSITE: https://greenactproject.eu/

PROJECT NO.: 2020-3-RO01-KA205-094853

PROJECT COORDINATOR: ASOCIATIA D.G.T

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Module 6: Climate change	
Topic 1: Climate Change: the biggest health threat	
Lesson Plan 1	
Duration: 45 minutes	
Short Description of the Lesson	Climate change is arguably the greatest public health threat in a myriad of ways. Yet these impacts on health are still not well recognized and this topic aims to take a deep dive into these effects. Climate change-related weather extremes, such as heatwaves, storms, and floods, lead to increased health issues, from mental ones to food-, water- and vector-borne diseases. Air pollution is undoubtedly closely related to climate change, as both can influence each other through complex interactions in the atmosphere. However, it is often that people are not aware of how noise pollution can be hazardous to our health in various ways as well.
Learning Goals	• To understand how climate change can impact human health • To know how noise pollution can impact human health • To relate human health with climate change • To explain how air and noise pollution is related to health issues for human • To propose an initiative/campaign to raise awareness about air pollution and ways to reduce it • To create a visual model that depicts the relationships between climate change and human health
Target Group	Young people aged 16-25
Educational Approach	This lesson plan will help young people learn how environmental issues can lead to human health problems.
Link to School Curricula (if applicable)	Environmental education
Facility/ Equipment	• Classroom • Internet access • Projector • Pencils/Pens/Colour pencils
Tools/ Materials	• Handbook • Template 1 • Canva links
Main tasks	1. Start with watching the following video (3 minutes): https://www.youtube.com/watch?v=G4H1N_yXBiA 1.1. Short discussion about the video (7 minutes)

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- *What causes climate change?*
- *What are the effects of climate change?*
-*What is the human impact and what are the consequences of climate change for the environment, and our lives?*

2. Present the following video that explains the potential impact of climate change on disease vectors and the spread of diseases, and consequently, on human health outcomes (5 minutes): https://www.youtube.com/watch?v=jDueuwB3Tcs

Use the Handbook from pages 7 – 11 for the following tasks:

3. After having watched the above video, open the link below and start a discussion about the world distribution of malaria from 2000 to 2019 (5 minutes): https://malariaatlas.org/explorer/#/
4. Start introducing air pollution and how it can be linked to human health problems by showing the following video (1 minute): https://www.youtube.com/watch?v=GVBeY1jSG9Y

4.1. Short discussion about the video and human health problems caused by air pollution (9 minutes):

- *What is particulate matter?*
- *Why is it dangerous?*
- *What are possible diseases associated with air pollution?*

5.2. Open the following canva link and ask your students to create a poster that they would use as a campaign to raise awareness about air pollution and its causes on human health (35 minutes):
https://www.canva.com/create/campaign-posters/

5. Finish the theoretical part of the lesson with noise pollution (see Handbook for more information) and a small discussion about it (10 minutes)

- *What are the main sources of noise pollution?*
- *How can noise pollution cause human health problems?*
- *Can it affect wildlife? How?*

6. Conduct the following activity to sum up everything they learned (25 minutes):

6.1. Use Template 1, in order to create a visual model that demonstrates an understanding of the complexities of the climate change-health effect system.

6.2. Make groups of students (3-4) and have them assigned a particular climate effect (e.g., extreme heat) and create a visual model that depicts the climate change (driver), environmental conditions, and health outcomes. Students consider relevant vulnerable populations.

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	6.3. Give this template either printed (not highly suggested) or present it on a projector. 6.4. Asked them to create the model on a paper on their laptop. 6.5. Bring all the models of all groups together to create a larger visual model.

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Module 6: Climate change	
Topic 2: Natural Catastrophes	
Lesson Plan 2	
Duration: 60 minutes	
Short Description of the Lesson	The key driver of climate change is the greenhouse effect, where heat-trapping pollutants became a blanket wrapped around Earth, resulting in global warming. Global warming has devastating effects, such as droughts, floods, wildfires, and other disasters, which can collectively be referred to as Climate Change. The current topic's goal is to address the differences between climate change, weather, and global warming and how these can lead to natural catastrophes.
Learning Goals	• To distinguish the difference between climate change, global warming, and weather • To understand how natural disasters are related to climate change • To explain the differences between climate change, weather, and global warming. • To describe how human activities can lead to climate change • To propose an experiment in order to identify the reasons for the sea-level rise • To build on strengths in working with others on team activities/experiments
Target Group	Young people aged 16-25
Educational Approach	This lesson plan will differentiate climate and weather. Through this lesson, young people will be able to understand how climate change and global warming have led, are leading, and will be leading to natural catastrophes, if humans continue contributing to this.
Link to School Curricula (if applicable)	Environmental education
Facility/ Equipment	• Classroom • Internet access • Projector • Pencils/Pens/Colour pencils
Tools/ Materials	• Handbook • Template 1 • Canva links • Materials for the experiment (+Worksheet)

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Main tasks

1. Ask students to share their knowledge about natural catastrophes in order to get them engaged in the subject (5mins):

-*What are examples of natural disasters they know?* Floods, droughts, wildfires, droughts, earthquakes, volcanoes, tsunamis, snowstorms, etc.
-After that, they should define natural disasters.
- *Which of these natural disasters are related to weather?* (See more questions and possible answers on the Handbook page 18)

2. Watch the following video (2mins):

Droughts by Nat Geo
https://www.youtube.com/watch?v=gv66U4tnO3M

2.1. Start an **8 min**-discussion asking the following:
- What are droughts?
- Do they happen naturally?
- Does climate change contribute to the droughts occurring more often?

3. Present the following photo on the projector:

3.1. Ask them how they think wild animals can be affected by wildfires.
3.2. If the classroom is equipped with computers/laptops give them **10 minutes** to do research on the following:
Can they list the types of animals that would be affected by drought and wildfire if both occurred in their local community?
What would happen to their habitats?
How would their food source be impacted?
What else could happen to the animals?

4. The following activity is about the sea level rise caused by climate change **(35minutes):**
They can propose an experiment to identify the reasons for the sea-level rise OR follow the instructions below to do a suggested experiment. The importance of the existence of the ice should also be discussed (reflects a good amount of percentage of the Sun's radiative force back into space/ Sea ice is crucial for bears' lives, as they use the ice to travel long distances to new areas and look for their prey).
4.1. See the Worksheet for this lesson plan

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	https://www.jpl.nasa.gov/edu/learn/project/how-melting-ice-causes-sea-level-rise/ 4.2. Discussion of the experiment results: *- In which container did the water level rise more?* *- How does this compare to their prediction?* *- Why do they think this occurred?* *- In what way is this related to global sea-level rise?* *- Does the melting of Earth's glaciers contribute to sea-level rise? How about the melting of icebergs?*

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Module 6: Climate change	
Topic 3: European/International Agreements to fight climate change	
Lesson Plan 3	
Duration: 90 minutes	
Short Description of the Lesson	United Nations Framework Convention on Climate Change (UNFCCC) is the parent agreement of the 2015 Paris Agreement, which mainly aims at climate-neutrality before the end of the century. In order to not exhaust what the planet can supply, climate action should be strongly linked with sustainability. One of the main aims of the 2030 Agenda is to ensure that the planet and its natural resources will be ensured for the current and next generations. Hence, this topic will focus on explaining and describing the European and International agreements and how they seek to fight climate change.
Learning Goals	• To outline the EU and International Agreements • To know the idea behind these agreements and why they should be implemented nationally and internationally • To differentiate what factors can shape and support more sustainable choices • To explain the social and economic externalities of climate change • To describe the benefits and drawbacks of current and projected climate policies, as well as the political dynamics that influence proposed changes • To verify greenhouse gas emissions reported by other countries • To develop a project or organization's complete emission reduction plan, in order to meet the agreements' standards • To create appropriate national and international standards to track and report greenhouse gas emissions
Target Group	Young people aged 16-25
Educational Approach	This lesson plan will state some agreements set to fight and combat climate change on a European and international level. Young people will learn about the policies and agreements and check if they are in line with them.
Link to School Curricula (if applicable)	Environmental education
Facility/ Equipment	• Classroom • Internet access • Projector • Pencils/Pens/Colour pencils
Tools/ Materials	• Handbook • A3 paper

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Main tasks	1. Start by watching the following video "UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE" (1min, 44sec) https://www.youtube.com/embed/CRt3T_VPcKA?feature=oembed 1.1. Start a discussion about UNFCCC (5 minutes) - *What is the UNFCCC?* *- Why was it important to come to this convention?* *- What is its goal?* *- How are climate change activities being supported?* *(see Handbook pages 19 and 20 for possible answers)* 2. Continue with the following video "What is the Kyoto Protocol?" (2min, 7sec) https://www.youtube.com/embed/DFhuNKNDrLg?feature=oembed and then proceed with the following "Ever wondered: What is the 'Paris Agreement', and how does it work?" (1min, 39sec) https://www.youtube.com/embed/WiGD0OgK2ug?feature=oembed 2.1. Start a discussion about the above videos (10 minutes) *- What is the Kyoto Protocol?* *- What is the Paris Agreement?* *- What are the differences between these two?* *(see pages 21 and 22 of the Handbook for possible answers)* 3. Calculate your carbon footprint! (20 minutes) 3.1. Go to this website: https://www.footprintcalculator.org/home/en 3.2. Students should answer the 13 questions and based on their answers they will get their Carbon footprint. - are they in line with the above-mentioned agreements? 5. Students will proceed by comparing the annual emissions of China, India, Italy, UK and the United States of America in 1910, 1950, 1990, 2016. (25 minutes) Use the following links: a. https://ourworldindata.org/grapher/annual-co2-emissions-per-country?time=1751..2016 b. https://ourworldindata.org/grapher/cumulative-co-emissions *- What accounts for the differences between the emissions of these countries?* *- Who emits the most CO2 today?* *- Who has contributed most to global CO2 emissions?* *- Which are the two nations that emit the most CO2?* *- If all nations would have to contribute to a "climate fund" equivalent to the CO2 they have emitted so far, which countries would end up paying most to the fund?* 6. For the following activity an A3 paper is needed for every group of 3 people. 6.1. Every group should write on paper ways that an organization or a household can cut emissions and propose an emission reduction plan. Travelings, Working hours at the office and remotely (if any), Summertime and wintertime for a/c and central heating should be considered too. (25 minutes)

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Module 6: Climate change	
Topic 4: Get inspired and innovate!	
Lesson Plan 4	
Duration: 80 minutes (indoors) 3hours (outdoors)	
Short Description of the Lesson	As the need for climate action arose, the fourth topic of this module will provide good practices and initiatives carried out on both European and international levels, in order to raise awareness. This will be the tool to inspire learners to find innovative solutions to climate change. It is aimed to state good practices of different fields so that the interrelation of the impacts of climate change on different sectors of society is addressed, therefore, everyone needs to start taking action.
Learning Goals	• To know different good practices related to climate action • To understand how different fields can be affected by climate change • To attempt solving a real-world problem • To structure a methodology of a good case • To develop their own ideas about rights and responsibilities now and in the future. • To propose a sustainable and innovative case to combat climate change
Target Group	Young people aged 16-25
Educational Approach	This lesson plan will provide the learner with some good examples and initiatives to combat climate change and start taking action.
Link to School Curricula (if applicable)	Environmental education
Facility/ Equipment	• Classroom • Internet access • Projector • Pencils/Pens/Colour pencils
Tools/ Materials	• Handbook • Worksheet
Main tasks	1. Begin the lesson by starting a discussion on the good practices of famous companies and how they try to mitigate climate change. Use the Handbook on page 23. (20 minutes) *- What do they think about these actions?* *- How can they be improved?* 2. Proceed with giving the worksheet of this lesson plan per a group of 3 persons. The current activity is for students to brainstorm (10 minutes) and come up with an innovative product (20 minutes)

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	that will use to fight climate change. Encourage them to **think of the following aspects when brainstorming:** - Innovation - Design - Environmental impact - How it can help the mitigation of climate change - The weakness and the strengths of the product Presentation of the product and discussion regarding the above-mentioned aspects shall follow (30 minutes)
Outdoor activity	**Beach clean-up (3 hours)** **Equipment:** • Gloves • Buckets/bags • Floor mat (or something else to put on the ground) to categorise and record the litter • Clean-up Protocol **Method:** 1. Pick a stretch of beach of around 100 metres 2. Let people spread out and start collecting 3. Continue collection 4. Come back together and empty out collected litter 5. Categorise collected litter and note down amounts on protocol 6. Discuss solutions to reduce humans' impact

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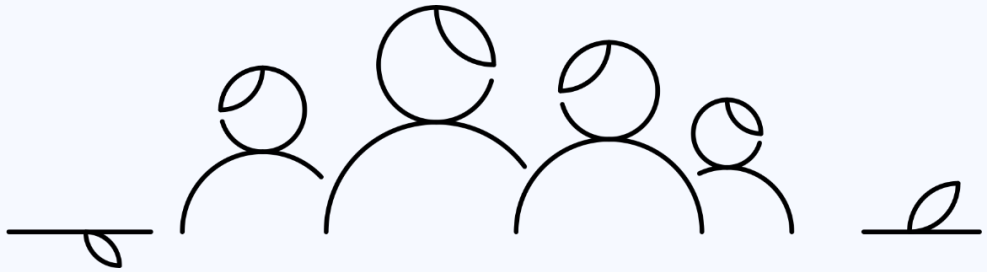
D.G.T. ASSOCIATION

Project number: 2020-3-RO01-KA205-094853

HUMAN IMPACT IN NATURAL SYSTEMS – ENVIRONMENTAL CHALLENGES-



YOUNG PEOPLE'S HANDBOOK

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Co-funded by the Erasmus+ Programme of the European Union

TOPICS

1. Different ecosystems and their importance.
2. Biodiversity and nature protection.
3. Biodiversity loss.
4. Urban & infrastructure pressure on ecosystems and biodiversity.
5. Deforestation & intensive farming.
6. Examples of good practices.

SHORT DESCRIPTION

The module's main target is to raise awareness amongst youngsters when it comes to environmental issues through a series of lesson plans. These plans are mainly focused on certain areas of human impact in natural systems, as well as the environmental challenges it imposes. The module focuses on the correlation between the human activity and the natural systems surrounding it through explanations, activities and examples.

LEARNING GOALS

1. To offer the needed tools to be able to tell what an ecosystem is, to differentiate the different types, as well as be aware of their importance
2. To develop certain ideas and types of behaviour to further protect the nature and the surrounding environment
3. To provide specific knowledge on biodiversity, invasive species and a general know-how to act
4. To make the user understand how the process of urbanization works, how it affects the ecosystems and the biodiversity
5. To raise awareness on the topics of deforestation and intensive farming, as well to offer the tools and knowledge on different types of agriculture and deforestation
6. To offer the knowledge on already existing good practices in terms of the human impact in natural systems – environmental challenges

KEY SYMBOLS

Symbols	Explanation
	Definitions
	Case study
	Additional Resources
	Tips
	Activities
	Reminder
	Video

1. DIFFERENT ECOSYSTEMS AND THEIR IMPORTANCE

Ecosystems = Ecosystem is the basic unit of the scientific study of nature. According to this discipline, an ecosystem is a physically defined environment, made up of two inseparable components:

- **Biotope** (abiotic): a specific physical environment with specific physical characteristics such as climate, temperature, humidity, nutrient concentration or pH.
- **The biocenosis** (biotic): collection of living organisms such as animals, plants or microorganisms, which interact continuously and are therefore in a situation of interdependence.

The concept of "**ecosystem**" can take on many **different levels**. From multicellular organisms such as insects, animals or plants to lakes, mountain ranges or jungles to the entire planet Earth.

1.1. Different ecosystems:

Forest ecosystems - are classified according to tropical, temperate or subtropical climates. In the tropics, rainforest ecosystems contain more diverse flora and fauna than ecosystems in any other region of the planet. In these hot and humid environments, trees grow tall, and foliage is lush, dense, with species living from the forest floor up to the canopy. In temperate regions, forest ecosystems can be deciduous, coniferous, or often a mixture of both, with some trees shedding their leaves each fall, while others remain evergreen year-round. . At the extreme north, just south of the North Pole, deep forests - also known as taiga - are home to many trees**.**

Grassland ecosystems - Different types of grassland ecosystems can be found in grasslands and savannas. Prairie ecosystems are usually found in tropical or temperate regions, although they can also exist in colder regions, as is the case with the famous Siberian steppe. The grasslands share a common climate characteristic of being semi-arid. Plants are sparse or non-existent, but flowers may intermingle with grass. Grasslands provide an ideal environment for herbivores.

1.1. Different ecosystems:

Tundra's ecosystem - As well as the desert, a harsh environment characterizes the tundra ecosystem. In the snowy, windy, treeless tundra, the ground can be frozen year-round, a condition known as permafrost. During the short springs and summers, the snow melts, creating shallow ponds that attract migratory waterfowl. Lichens and small flowers may appear during this time of year. The term "tundra" generally refers to polar regions, but at lower latitudes tundra-like communities known as alpine tundra can be found at higher elevations.

Freshwater ecosystem - Freshwater ecosystems can be found in freshwater springs, rivers, streams, ponds, lakes, swamps, and marshes. They are divided into two categories: those where the water is almost stationary, like a pond, and those where the water flows, like a stream. Freshwater ecosystems are home to many species of fish: algae, plankton, insects, amphibians and aquatic plants also inhabit them.

Marine ecosystem - Marine ecosystems differ from freshwater ecosystems in that they contain salt water, which often supports other types of organisms than freshwater. Marine ecosystems are the richest type of ecosystem in the world. These include not only the ocean floor and surface, but also tidal areas, estuaries and salt marshes, mangroves, and coral reefs.

Explore your area! Ecosystem reflections

Participants are divided into groups of 3-4 people. The task is to explore the community and to find out what types of ecosystems can be found. Remind the participants to not only stick to the big ecosystems presented before, but to take into consideration the smaller ones as well, such as the bacterial ecosystem, flower ecosystem and so on (abiotic or biotic). Time needed:

- 30 minutes to explore the community
- 30 minutes for discussion

Questions for debriefing:

1. 1. What did you do?
2. What types of ecosystems did you find?
3. How did you work in your team? Did you have a strategy? Which one?
4. How did you feel doing this activity?
5. What have you learned?

1.1. THE IMPORTANCE OF DIFFERENT ECOSYSTEMS:

Ecosystems explain how energy and matter circulate or move through different environments including biotic and abiotic factors. An interactive stable system or biome formed by the interaction of different organisms with each other, and non-living components of the environment is called an ecosystem. Let us understand more about the importance of the ecosystem.

The role of the ecosystem

Key points covering the role of ecology in the world are:

- It is important to have ecological processes and regulations of the energy flow, support of living systems and provide stability.
- It is required to have an extremely important process known as the nutrient cycle, where nutrients in the form of energy and matter are exchanged between biotic and abiotic components.
- It is useful to maintain a good balance between different nutrient levels of the ecosystem.
- Ecosystems allow recycling of minerals in the biosphere. The biosphere is briefly explained later in the document.
- It produces many organic compounds that help exchange energy between different levels of organisms.
- It enriches people with food, fiber, paper, wood and medicine; it also provides renewable and non-renewable energy sources.

WHY IS THE ECOSYSTEM SO IMPORTANT?

The importance of the ecosystem can be understood in terms of the following points and all related terms and factors:

- Conservation of matter and energy takes place in ecosystems, and the energy flowing through the system is balanced as it flows from one organism to another, and matter is recycled.
- The different ecosystems that interact with each other are called the biosphere. So, we can say that the biosphere is the sum total of all global ecosystems.
- An ecosystem includes:
- A community
- Biotic ingredients
- Abiotic ingredients

Biotic and abiotic factors in the ecosystem

In the case of biotic elements, without the producers on this earth, no other life would exist in the world today. These biotic elements are fundamental to the food chains formed by all other ecosystems on earth. For example, a tree produces fruit that can be eaten by humans or any other living organism. The same plant also helps convert carbon dioxide from normal air into oxygen, which is inhaled by humans during the respiratory process. In addition, the plant also stores energy and acts as a decomposition element, which can also be used as fuel. Thus, a single value producer creates more than one life factor on earth, which makes ecosystems more alive and productive than any other living thing on earth.

Likewise, abiotic factors include all the nonliving physical and chemical parts of an ecosystem that shape its environment and help maintain a healthy ecosystem. In terrestrial ecosystems, examples might include temperature, light, and water, and in marine ecosystems, abiotic factors would include salinity and ocean currents.

Small reminder:

An ecosystem is a geographical area where plants, animals, and other organisms, as well as weather and landscapes, interact with the seasons and the environment and strive to coexist. Ecosystems include both biotic or living organisms, as well as abiotic factors including non-living organisms. The biotic factors are the living organisms in an ecosystem including plants, animals and bacteria while the abiotic factors are the non-living components related to water, soil and atmosphere.

How does the energy flow in the ecosystem - https://www.youtube.com/watch?v=5jBV9vJmXZI

The ecosystems

The group of the participants will be split in 4 groups: seaweed, fishes, pelicans and humans

Each group will have 2 lives and the following tasks:

seaweed - they will have 2 minutes to find a place to hide. In the moment in which they will find the place, they will not be allowed anymore to move;

fishes - they will also have 2 minutes to find a place to hide. When the activity will start their task will be to find the seaweed and to “eat” it and also to hide from the pelicans and humans.

pelicans - they will also have 2 minutes to find a place to hide. When the activity will start their task will be to find the seaweed and the fishes and to “eat” them and also to hide from the humans.

humans - they will be allowed to enter the last one. They will have the task to find all the other species and to “eat” them.

Time needed:

2 minutes for letting the seaweed to hide, continuing with 2 minutes for letting the fishes to hide, then 2 minutes for letting the pelicans to hide

10 minutes for completing the tasks

20 minutes for discussions

Possible questions for debriefing:

Possible questions for debriefing:

1. How was it for you to be involved in such activity?
2. How was it for you to follow the rules?
3. What can we learn from this activity?

This activity can be done with species from different ecosystems (for example with species from forest ecosystems, such us: weed, small birds, predatory birds, humans).

2. BIODIVERSITY AND NATURE PROTECTION

Biodiversity must be protected and maintained to **preserve life-sustaining conditions** on the planet. Protection is required because many organisms and habitats are already threatened by harmful human-induced changes. Biodiversity is conserved by creating nature reserves and protecting different types of habitats and species.

Healthy ecosystems, the interdependent web of living things and their physical environment, are essential for all life on Earth. Our ecosystem provides us with clean air, fresh water, food, resources, and medicine.

Biodiversity, the variability of life on Earth, is a major factor in nature's resilience. In a biodiverse ecosystem, if the environment changes and some organisms can no longer thrive, others can take their place and perform essential functions. It is often the neglected species most important to healthy ecosystems. For example, insects play an important role in pollinating flowering plants – a third of the food we eat depends on pollinators.

On the European level there is the EU's biodiversity strategy for 2030, a comprehensive, ambitious and long-term plan to protect nature and reverse the degradation of ecosystems. Three of the targets concern the network of nature protection areas. These are:

- increasing the surface area protected so that a minimum of 30% of the EU's land area and 30% of the EU's sea area are covered by legal protection
- strictly protecting at least, a third of the EU's protected areas, including all remaining primary and old-growth forests
- more effective management of all protected areas

Exploring the ecosystem protection in my community

The first step of the activity - The group of the participants will be divided into small groups of 4-5 participants. Each group will have the task to find at least 5 measures that the local authority from their community takes for the protection of ecosystems.

The second step of the activity - the same small groups of the participants will now have the task to propose some new measures that the community should take into account in order to protect the ecosystem.

Time needed:

- 15 minutes for completing the task
- 15 minutes for proposing the new measures
- 20 minutes for discussions

Possible questions for debriefing:

1. What are the measures that you have found?
2. Where did you find the information describing them?
3. What are the new measures that your group wants to propose?
4. What are the measures that people in general can take in order to protect the ecosystems?
5. What have you learned from this activity?

3. BIODIVERSITY LOSS

Biodiversity loss has many causes, but the biggest culprits by far are habitat destruction and over-exploitation of species, driven by exploding numbers and our unsustainable consumption.

Habitat Destruction 

The increase in population brings with itself the need of having more and more living space. Harmful human activities continue to encroach on the natural environment, destroying the habitats of countless species. As our numbers increase, cities, infrastructure, and arable land (see "Agricultural Intensification" below) expand and merge, splitting the remaining habitat and leaving isolated "islands" with natural populations of plants and animals too small to exist. According to IPBES, only a quarter of the land surface and a third of the ocean are left relatively untouched by human activity.

Overexploitation 

Population increase also means that the need to have more and more things gets bigger according to the need. Humanity's relentless consumption of resources such as wood, oil and minerals continues to destroy natural habitats around the world. We also put enormous pressure on wildlife populations, both through bush hunting in the developing world and large-scale industrial fishing in our waters. Poaching and wildlife trade remains a major threat to many species, including rhinos, tigers and pangolins.

Climate change

With a rising human population number, the climate emissions began to grow as well. Our planet is on the verge of a climate crisis due to our relentless production of greenhouse gasses, including carbon dioxide and methane. We are headed for a 3-4°C warmer world by the end of this century if the current climate ambitions of nations are fulfilled. We have seen the decline of species due to the increase in global temperature. Each half-degree of warming has a major effect on ecosystems, with mobile species lacking migratory zones and temperature-sensitive organisms such as corals dying out. As key rock species such as reef-building corals disappear, the rich and complex ecosystems they support also collapse.

Pollution

As the population grows, the disposal of waste from households, agriculture and industry is becoming more and more a serious problem. Our oceans are choking with plastic waste that is killing millions of animals, from sea turtles to whales. The Ellen MacArthur Foundation estimates that by 2050 there will be more plastic than fish in the sea. In addition to affecting human life, noise, light and chemical pollution harm the health of wildlife.

Invasive species

Human movement around the world has a huge emissions footprint, but it also facilitates the spread of invasive species, both accidental and intentional. Due to the introduction of non-native species in some areas, such as rabbits and cats in Australia, goats in Saint Helena and American mink in the UK, we have endangered many vulnerable ecosystems, threaten native species, and reduced biodiversity.

Agricultural intensification

The bigger the population, the bigger the need for nourishment and food. Agriculture deserves special mention here as it is one of the main causes of habitat destruction, climate change and pollution. Agriculture accounts for 50% of Earth's habitable land area, 80% of threatened mammal and bird species are due to agriculture, and our modern food system is also a factor. The largest contributor to climate change, responsible for about a third of all greenhouse gas emissions, more than half of which comes from livestock farming. In response to the unsustainable consumption patterns of the Global North and to feed our huge population, humanity has developed agricultural systems based on monocultures, artificial fertilizers, drugs and insecticides. Monoculture households are increasingly susceptible to disease and therefore require extensive use of pesticides to destroy insect populations. Intensive agriculture leads to soil depletion and runoff from farms contaminates water sources and causes harmful algal blooms and a decline in fish stocks.

Quiz - Test your knowledge on biodiversity loss! - https://populationmatters.org/test-your-knowledge-biodiversity-loss

https://climateprimer.mit.edu/climate-science - MIT Climate Science, Risk & Solutions is an interactive, online textbook from MIT that can be used as a supplemental resource for high school teachers approaching the topic with their classes. The site offers a historical timeline, graphs, and images to tackle the science, and the slick interactive features will be engaging to teens. Students can scroll through the entire text, or jump among the topics, which are divided into sections: Climate Science, Climate Change, Risk, and Solutions. Each chapter uses different elements to engage students; read-aloud sections, interactive graphs, and short quizzes help break up the dense text.

https://climatekids.nasa.gov/menu/watch/

Debates - Do you think that in the future we will be affected by climate change?

The facilitator will spelt the room in two, sticking down on the floor the following messages:

- I agree
- I don't agree

The participants will be invited to take part in this activity and to position themselves in the room in accordance to their answers to the next questions/sentences and to explain their answers:

1. It is too late to prevent climate change.
2. Is it the responsibility of the governments to protect nature?
3. In the future the most affected countries by climate change will be the ones that are not so developed.
4. After the COVID-19 restrictions were lifted the pollution levels decreased.
5. Should people focus more on the endangered species rather than on the ones who are not at risk?
6. Will the effects of climate change be worse than a disease?
7. The effects of climate change will drive more people into poverty.
8. At the moment, over two-thirds of the land in Africa is degraded. Does this affect us as Europeans?
9. Do the daily activities that we do increase climate changes?
10. During the COVID-19 pandemic the climate change effects decreased.

Time needed:

- 30 minutes for debates
- 20 minutes for debriefing

Possible questions for debriefing:

1. How did you feel during this activity?
2. What have you learned?
3. What action can you take in your daily life in order to protect nature?

4. URBAN & INFRASTRUCTURE PRESSURE ON ECOSYSTEMS AND BIODIVERSITY

The integration of biodiversity into urban development is important for many Sustainable Development Goals, especially:

- Goal 3. Good health and well-being,
- Goal 6. Drinking water and sanitation,
- Goal 11. Sustainable cities and communities
- Goal 12. Sustainable consumption and production,
- Goal 13. Climate action and
- Goal 15. Life on land.

Cities are often located, and tend to expand, in areas important to biodiversity such as estuaries, coastlines and fertile plains. Biodiversity and ecosystem services - both within cities and beyond borders - are important to urban dwellers because they contribute to food and water supply, temperature regulation, absorption pollution, reduce vulnerability and disaster risk, and provide accommodations and recreational opportunities that contribute to human well-being, economic stability, and material security. Today, more than half of the world's population lives in towns and cities, a number that will increase to two-thirds by 2050. The projected urban growth and expansion can lead to significant biodiversity loss as natural habitats are fragmented or displaced by infrastructure construction and city expansion.

The pressure on existing urban ecosystems will increase as a result of predicted climate change effects like floods, droughts, and heat waves. The production of vital ecosystem services in cities will be significantly impacted by the combination of these elements, which will have an adverse influence on the citizens' quality of life. For instance, **poorer air quality** and less resilience to natural catastrophes are two consequences of the loss of urban ecosystem services. Cities will flood more frequently, negatively affecting infrastructure and services like water and sanitation, sewage, and energy delivery. **The urban poor are particularly sensitive** to these changes because they frequently reside in risky regions, have fewer resources to adapt to changes, and depend heavily on ecosystem services in the area for their livelihoods.

Nature-based solutions are actions that leverage ecosystem services provided by nature to address environmental problems, such as climate change. They are composed of "**smart**" green infrastructure solutions that alter how urban infrastructure, including roads, drains, floodgates, riverbanks, water and sanitation facilities, electricity supply, and buildings, is thought of, designed, and managed to be resilient to the effects of climate change. Solutions derived from nature have been demonstrated to be resource and cost efficient. Here are a few illustrations of how to incorporate environmentally friendly ideas into urban planning.

Building **natural barriers** like mangroves, oysters, and coral reefs in coastal cities can lessen the risk of storm and wave damage, filter contaminated waters, and sustain local fishing communities.

In addition to lowering temperatures and pollution levels and enhancing people's health, planting trees and creating or restoring green public spaces in cities can **boost tourism profits and offer leisure options.**

Supporting **urban farming** in public spaces, as well as in backyards and communal gardens, can increase food security in emergency situations and generate additional income, particularly for women.

Buildings' **energy consumption can be decreased**, noise levels can be lowered, heat stress can be decreased, and rainwater can be captured and used again.

Floodplain restoration, the development of permeable surfaces, and the installation of stormwater tree pits protect towns from flood damage, enhance the habitats of wild animals, aid in the re-flooding of carbon-rich soils, lower nitrogen loads, and enhance the landscape.

Plant your vegetables! (in order to implement this activity, the young people will need the agreement of the local authority in order to create the city garden).

The group of the participants will be split in groups of 4-5 persons. Each group will have the task to find a place in their community that can be changed in a small garden. Together with the facilitator the young people will need to choose some vegetables that can be gardened.

The idea of this activity is to involve young people in their community and to take advantage of the places that are not used and to create a vegetable garden.

Time needed: 1 day in order to plant the vegetables

Possible questions for the debriefing:

- How did you feel during this activity?
- What have you learned?
- What action can you take in your daily life in order to protect nature?

5. DEFORESTATION & INTENSIVE FARMING

The number of cattle required to produce beef grows in tandem with global meat demand. Every year, millions of acres of uncultivated land are cleared to make way for feed crops and grazing pastures because these animals require space and food. Forests are being cleared to provide fodder for chickens and pigs, among other animals.

Animals usually need more energy to maintain themselves than they do to provide food for people to eat. Therefore, raising animals for food is always more damaging than raising plants for human use.

On the planet, **45 percent of the land is used for livestock operations**, while another 10 percent is set aside for the cultivation of crops used as animal feed. The production of beef alone uses around 60% of the world's arable land, necessitating a sizable amount of space for cattle grazing and the cultivation of feed crops like soy. In the last 20 years, soy production has increased, mostly due to the expansion of animal husbandry. In tropical regions, 1.2 million acres of land are cleared each year for soy farming; if animal protein consumption is not decreased, this amount will rise.

The plant and animal species that inhabit our biodiverse rainforests **are frequently the ones most severely impacted by destruction**. Not counting the damage caused by recent fires, at least 15% of the Amazon rainforest has already been gone. Most of that land—about 80%—is dedicated to raising crops and establishing livestock grazing pastures.

Although humans have been cutting down trees for thousands of years, **the industrial revolution of the nineteenth century increased demand for lumber** and brought to the development of technologies that sped up and simplified the process of clearing land.

Although it is difficult to determine an exact figure, it is **estimated that between 3.5 and 7 billion trees are felled each year**. Nearly 30% of this estimate is attributed to the rise of agriculture, which includes clearing land for grazing and growing crops for livestock.

Every year, **6.7 million acres of tropical forests are bulldozed** or set on fire for the purpose of raising cattle. This is more than five times more harmful than any other product in the area and is responsible for more than half of South America's deforestation.

A silent rival that has doubled in the past 20 years due to the rise in demand for meat and dairy products is soy cultivation for animal feed. Eighty percent of the 346.02 million metric tons of soy produced annually across the world is consumed by animals. In Brazil, soy farming occupies almost 60 million acres completely, and that number is rising in step with the rise in demand for meat.

Although many different businesses directly or indirectly contribute to deforestation, animal agriculture is the primary culprit. Logging and infrastructure development follow closely. There are certain natural causes of deforestation, such as forest fires and invading species, but they are frequently made worse by human activity.

Logging

Logging is the process of chopping and preparing trees for the production of goods made of wood. Our trees are heavily logged in order to construct homes and make paper products.

15% of the world's annual greenhouse gas emissions are caused by the logging and conversion of tropical forests. Logging is becoming one of the main causes of deforestation as the world's population rises and more homes are constructed.

Clearcutting is a more intrusive tree removal technique that eliminates all trees and tree seedlings from a region. This kind of logging is frequently employed in ranching to increase the size of croplands and grazing pastures in addition to being used to produce paper and lumber. In addition to endangering the normal regrowth of tree saplings, this rapid clearing of forests also poses a hazard to animal and plant species.

Selective logging, which involves only a few trees being cut down per area, is slightly less invasive and employed for high-value wood products, but smaller trees are still harmed and local species are still displaced. According to a study, selective logging can actually increase the total number of trees cut annually rather than decrease it.

Since trees and bushes no longer block water from entering forests, both clearcutting and selective logging make forests more prone to flooding and fires. In addition, logged areas are more exposed to sunshine, which dries them up and makes them more flammable.

Forest Fires

To make room for cattle and feed crops, forests are set on fire, destroying the vegetation and wildlife in the process. These deliberate fires, often known as "slash-and-burn fires," disrupt soil fertility, change water cycles, and endanger communities of people who live and work in the forests.

One of the biggest wildfires in recorded history occurred in 1997 as a result of intentionally started fires that erupted throughout Indonesia. The flames claimed the lives of hundreds of humans, animals, and plants. For months, dense smoke blanketed nearby nations including the Philippines, Thailand, and Malaysia, and locals were urged to stay indoors.

Expansion of Infrastructure

As the world's population grows, cities and highways expand, often to the detriment of biodiverse forests. The Interoceanic Highway, which stretches over 1,600 miles across Brazil and Peru, rips through lush forests to make room for cars and trucks.

The construction of roads through forests, particularly the Amazon rainforest, increases the likelihood of animal deaths due to habitat loss and motor accidents. New roads also make illegal logging and poaching more convenient. Infrastructure expansion not only displaces animals and increases the risk of deforestation, but it also encroaches on the homes and livelihoods of local residents.

013 ARTICLE READING How Does Agriculture Cause Deforestation, and How Can We Prevent It? - https://sentientmedia.org/how-does-agriculture-cause-deforestation/

The Fire in the Mediterranean Region: A Case Study of Forest Fires in Portugal: https://www.intechopen.com/chapters/55996

6. EXAMPLES OF GOOD PRACTICES

There are different initiatives coming from multiples entities that aim to decrease the human impact on nature by:

- the initiative to collect trash from certain areas such as beaches, forests, seas, oceans, mountain trails or even from cities
- the existence of National Parks in each state, meaning there is a slightly larger area protected by the country's government
- switching from fossils fuels to renewable types of energy
- the creation of multiple spaces where trash can be selectively collected, as well as having legal contexts for littering
- raising awareness campaigns over water or energy waste
- some countries having a concrete curriculum for environmental preservation and protection, as well as teaching children on human impact on the surroundings
- the existence of international agreements such as the Paris agreement from 2015
- promoting public transportation campaigns in big cities
- the initiatives to replant certain areas of forests or to plant new areas
- create more eco-friendly houses

Take action!

The group of the participants will have the task to choose an action that they can do at that moment, in order to protect the environment. They will have 10 minutes to think about the action that they want to take and the necessary materials that they need (garbage bags, gloves, laptops etc.)

Time needed:

10 minutes

60 minutes for implementing the activity

20 minutes debriefing

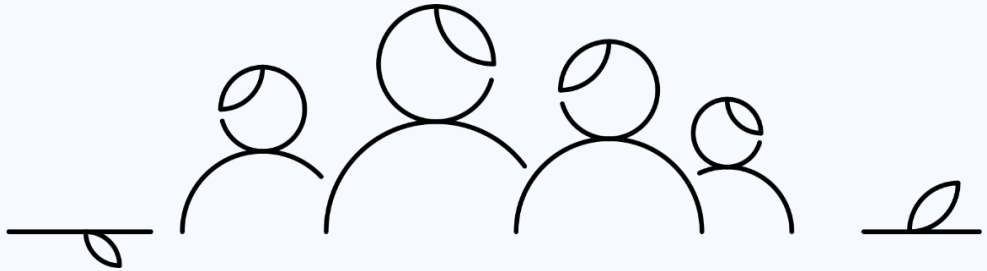
Possible questions for debriefing:

1.How did you choose the activity?
2.Which was your strategy in doing the activity?
3.How did you feel while implementing the activity?
4.What impact do you think this activity will have on your community?

5.What have you learned from this activity?

REFERENCES

1.Nature and biodiversity - Environment - European Commision - https://ec.europa.eu/environment/nature/index_en.htm
2.Urban development, Biodiversity and Ecosystem - https://cdn.sida.se/publications/files/sida62003en-urban-development-biodiversity-and-ecosystems.pdf
3.Nature & Biodiversity - European Commision - https://webgate.ec.europa.eu/greencitytool/resources/docs/guidance/nature.pdf
4.Biodiversity strategy for 2030 - European Commission - https://environment.ec.europa.eu/strategy/biodiversity-strategy-2030_en
5.Our Climate Our Future project (educational materials for environment protection) - https://ourclimateourfuture.org/resource/discussion-guide/
6.Global Oneness Project houses resources that explore life experiences around the world - https://www.globalonenessproject.org/
7.You matter world Association - https://youmatter.world/en/definition/ecosystem-definition-example/
8.Population matters - https://populationmatters.org/test-your-knowledge-biodiversity-loss
9.MIT Climate Science, Risk & Solutions - https://climateprimer.mit.edu/climate-science/
10.Climate Kids - Earth Science Communications Team at NASA's Jet Propulsion Laboratory / California Institute of Technology - https://climatekids.nasa.gov/menu/watch/
11.Sentient media - 013 ARTICLE READING How Does Agriculture Cause Deforestation, and How Can We Prevent It? - https://sentientmedia.org/contact/



https://greenactproject.eu/

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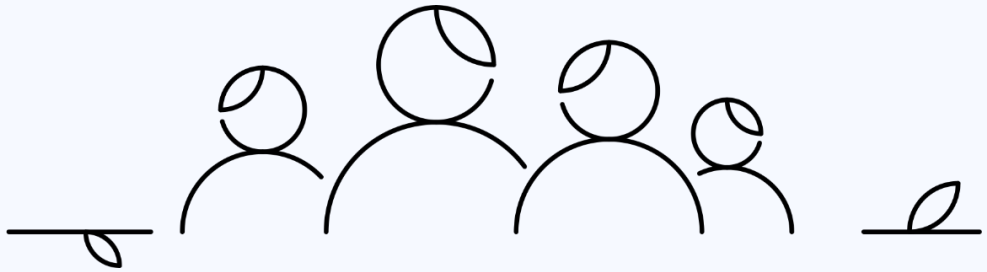
greenACT

D.G.T. ASSOCIATION

Project number: 2020-3-RO01-KA205-094853

– GREEN LIVING-
ADOPTING AN ECO-FRIENDLY LIFESTYLE



YOUNG PEOPLE'S HANDBOOK

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Co-funded by the Erasmus+ Programme of the European Union

TOPICS

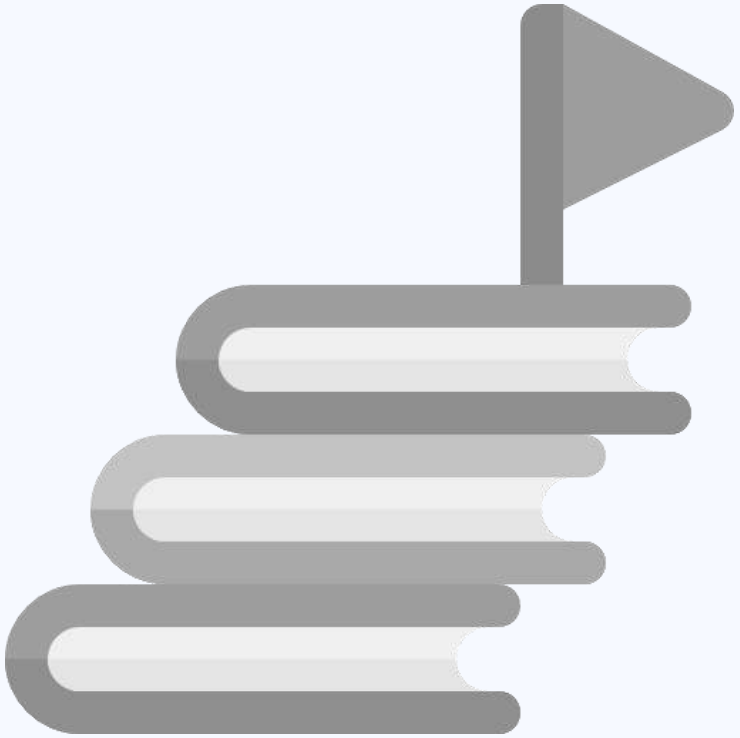
1. Healthy food consumption
2. Composting and its benefits
3. Green International Development Cooperation
4. Buying smart
5. Green ways of transportation
6. Examples of good practices

SHORT DESCRIPTION

The module's main target is to raise awareness amongst youngsters when it comes to environmental issues through a series of lesson plans. These plans are mainly focused on certain areas of how people can adapt to a eco-friendlier lifestyle through changes that would not disrupt the quality of their lives. The module itself is also full of examples and in detail descriptions of various methods on how people can be eco-friendlier when it comes to their lifestyle.

LEARNING GOALS

1.To define composting methods method through the needed tools and how it can be used or adapted to each lifestyle
2.To develop certain ideas and types of behaviour to further procure healthy food
3.To be aware of different methods that can be used to adopt an eco-friendlier lifestyle.
4.To understand how to pick the best options and buy smart for themselves.
5.To be able to recognise the need and importance of various methods of transportation and to choose the best for both themselves, and as well for the environment.
6.To offer the knowledge on already existing good practices in terms of already adopting an eco-friendlier lifestyle.



KEY SYMBOLS

Symbols	**Explanation**
	Definitions
	Case study
	Additional Resources
	Tips
	Activities
	Reminder
	Video

1. DIFFERENT ECOSYSTEMS AND THEIR IMPORTANCE

Healthy food = food that provides you with all the nutrients you need to sustain your own body, its well-being and to be able to retain energy. The key nutrients each body needs are water, carbohydrates, fat, protein, vitamins and minerals in order to have a well, healthy and balanced diet.

Different types of food and their roles:

- **Fruits and berries:** sweet and nutritious, they are a key element of a healthy diet. Starting from a young age, people are encouraged to consume as many fruits as possible
- **Eggs:** among the most nutritious foods on the planet
- **Meat:** lean and unprocessed meats can be included in a healthy diet.
- **Nuts and seeds:** although they are high in fat and calories, they may help in weight loss
- **Vegetables:** some of the most concentrated sources of nutrients.

1. Food consumption – policies at national and international level

The Green Deal is built around the Farm to Fork Strategy. It acknowledges the indissoluble linkages between healthy individuals, healthy society, and a healthy environment and completely addresses the difficulties of sustainable food systems.

According to the Strategy, there are four key conditions for sustainable food systems: ensuring that the whole food supply chain—including food production, distribution, marketing, and consumption—has a neutral or favorable impact on the environment;

1. Food consumption – policies at national and international level

In accordance with its goals and the **Sustainable Development Goals** (SDGs), the Strategy declares that the EU will promote the worldwide transition to sustainable agri-food systems. The EU will increase collaboration in particular to enhance.

By enhancing the resilience of food systems and lowering food waste, the EU will increase collaboration in particular to promote nutrition and reduce food poverty. Cooperation will be in the following areas: food research and innovation, with a focus on climate change adaptation and mitigation; agroecology; sustainable landscape management and land governance; conservation and sustainable use of biodiversity; inclusive and fair value chains; nutrition and healthy diets; prevention and response to food crises, especially in fragile contexts; resilience and risk preparedness; integrated pest management; plant and animal health.

Did you know?

The participants will be split into 3-4 groups, depending on how big the participant number is. They will be given the task to find an idea for healthy food consumption. Each group will present their idea and will advocate for it, trying to convince the other members of the other groups to join their group. The group with the greatest number of people wins.

Time needed:

- 10 minutes to come up with the idea and how to present it
- 15 minutes to present
- 5 minutes to settle down for the winner group

Small reminder:

Healthy food is a right everybody should have access to and should consume it. Different legislations, policies and amendments were made on EU and international level. It is important to keep both a healthy mind and a healthy body and through nutrition is the easiest way to maintain a qualitative lifestyle.

How to Create a Healthy Plate - https://www.youtube.com/watch?v=Gmh_xMMJ2Pw

Questions for debriefing:

1. What did you do?
2. What types of healthy food did you find?
3. How did you work in your team? Did you have a strategy? Which one?
4. How did you feel doing this activity?
5. What have you learned?

2. COMPOST AND ITS BENEFITS

Compost is a mixture of ingredients used to fertilise plants and improve the physical, chemical, and biological properties of soil. It is typically made by decomposing plant matter, food waste, recycling organic materials, and manure. The resulting mixture contains a high concentration of plant nutrients as well as beneficial organisms such as bacteria, protozoa, nematodes, and fungi. Compost improves soil fertility and reduces reliance on commercial chemical fertilisers in gardens, landscaping, horticulture, urban agriculture, and organic farming. Compost benefits include providing nutrients to crops as fertiliser, acting as a soil conditioner, increasing the humus or humic acid content of the soil, and bringing beneficial microbes that help to suppress pathogens in the soil and affect soil diseases.

2. COMPOST AND ITS BENEFITS

Composting, at its most basic, entails gathering a mixture of 'greens' (green waste) and 'browns' (brown waste). Greens are nitrogen-rich materials such as leaves, grass, and food scraps. Browns are carbon-rich woody materials such as stalks, paper, and wood chips. The materials degrade into humus over a period of months. Composting is a multi-step, closely monitored process that requires measured inputs of water, air, and carbon- and nitrogen-rich materials. The decomposition process is aided by shredding the plant matter, adding water, and ensuring proper aeration by turning the mixture on a regular basis in a process that employs open piles or "windrows." Fungi, earthworms, and other detritivores break down the organic material even more. The chemical process is managed by aerobic bacteria and fungi, which convert the inputs into heat, carbon dioxide, and ammonium.

Composting is a method of aerobically decomposing organic solid waste. As a result, it has the potential to recycle organic material. Compost is made by decaying biological matter into a humus-like material that serves as a good fertiliser for plants. To function properly, composting organisms require four equally important ingredients:

- Carbon is required for power generation; microbial oxidation of carbon generates the heat needed for other parts of the composting period. High carbon materials are typically brown and dry.
- Nitrogen is required for more organisms to develop and reproduce in order to oxidise the carbon. High nitrogen materials are typically green and wet. They can also include brightly colored fruits and vegetables.
- The decomposition process requires oxygen to oxidise the carbon. Aerobic bacteria require oxygen levels above 5% to perform the composting processes.
- Water is required in sufficient quantities to maintain activity without causing anaerobic conditions.

Benefits of doing compost at home:

- Composting is an excellent way to recycle organic waste at home. Food scraps and garden waste account for more than a quarter of all waste. Besides food waste being bad for the environment, it's also expensive to process.
- Compost is a critical tool for enhancing large-scale agricultural systems. Compost contains three essential nutrients that garden crops require: nitrogen, phosphorus, and potassium. It also contains trace amounts of other essential elements such as calcium, magnesium, iron, and zinc. Composting provides an organic alternative to synthetic fertilisers that contain harmful chemicals. Compost has been shown in studies to improve soil water retention capacity, productivity, and resiliency. It can also be used on smaller areas, such as a private garden or a small one.
- By taking care of the food waste, people become more aware of what they use and what they need. Thus, by composting, people can identify their own personal source of waste and try to minimise it in such ways that the compost itself would be reduced too. Composting is a great tool to learn how to stick to your own needs and to not over-consume.

Types of composting:

- **Cold composting** degrades organic matter slowly, but it requires the least amount of effort and upkeep. Anything organic ultimately decomposes; cold composting is basically letting nature do its thing with minimal intervention on your part. You don't have to worry about the compost ingredient ratio, aeration, or moisture levels. If you have little organic waste to compost, don't have much time to tend to the process, and aren't in a hurry for finished compost, cold composting is the best option. However, depending on the cold method used, it can take one to two years to produce usable compost.

- **Hot composting** is a faster but more controlled composting method. This method necessitates careful attention to maintain the optimal carbon-nitrogen ratio for decomposing organic waste. It also necessitates the proper balance of air and water in order to attract organisms that thrive in an oxygen-rich environment. Under ideal conditions, the final compost product could be ready in four weeks to a year. If properly managed, the high temperature of the pile will kill most weeds, plant diseases, pesticides, and herbicides, as well as any bug larvae or eggs.

How to do compost - steps:

- Determine how you will collect and store your browns and greens.Collect and store your fruit and vegetable scraps in a closed container on your kitchen counter, under your sink, or in your fridge or freezer. Set aside an area outside to store a steady supply of leaves, twigs, or other carbon-rich material for browns (to mix with your food scraps).
- Set aside room for your compost pile and construct or purchase a bin. Choose a location in your yard for your compost pile that is accessible all year and has good drainage. Avoid putting it right next to a fence and make sure there is a water source nearby. In the sun or the shade, your compost pile will decompose. Next, select a bin type for your pile. Bins can be made from a variety of materials, including wire, wood, and cinder blocks. They can also be enclosed, with barrels and tumblers included.
- Prepare your compostable ingredients. Try to chop and break up your browns and greens into smaller pieces before adding them to the pile (e.g., corn cobs, broccoli stalks, and other tough food scraps). This will aid in the breakdown of the materials in the pile.

- How to Make a Compost Pile. Begin with a four- to six-inch layer of bulky browns like twigs and wood chips. This layer will absorb excess liquids, raise your pile, and allow air to circulate at the pile's base. Then, like lasagna, layer your greens and browns. If necessary, dampen the pile with a little water. The right proportions of ingredients in your compost pile will provide the carbon, nitrogen, oxygen, and moisture that composting microorganisms require to break down the material into finished compost.
- Keep up with your compost pile. As the materials in your compost pile decompose, the temperature of the pile rises at first, especially in the centre. A well-maintained backyard pile can reach temperatures ranging from 50° to 70° C. High temperatures aid in the reduction of pathogens and weed seeds. Turning and mixing your pile on a regular basis will help speed up the decomposition process and aerate it. Turn the outside of the pile inward with a garden fork.
- Collect your completed compost. Allow your compost pile to cure, or finish, for at least four weeks after it has stopped heating up after mixing and there are no visible food scraps. You can either separate the oldest compost at the bottom of the pile to cure or stop adding materials to your pile. Your pile will have shrunk to about one-third of its original size after curing.

Once you've determined that your compost is mature, here are some applications for it:

- It can be used as mulch.
- Mix it into your potting soil.
- Incorporate it into crop beds.
- Spread it on lawns.
- Incorporate it into garden beds.
- Feed it to your houseplants.
- It should be added to the soil around fruit trees.

Do you know what to do?

This activity will be done individually. Each participant will need their own supplies and will learn how to do compost. They will first add the soil in the jar, followed by newspaper and scraps, topped with the yard debris. They will repeat the process until the jar is almost full. After that they will add the water to the jar and write their names on it. The jars will be all set in a sunny area and every two weeks they will check the level of compost by marking a sign on the jar with the marker.

Supplies:

- A wide-mouth glass jar
- Organic yard debris (such as fallen leaves, grass clippings, and dirt)
- Old newspaper
- Fruit and vegetable peels, cores, and scraps from the kitchen
- 1 cup rainwater
- A permanent marker

Time:

- 40 minutes for preparation

Possible questions for debriefing:

1. What is the type of composting that seems the most interesting to you?
2. What process seems the hardest?
3. Do you think you could start doing compost on your own or would you be considering doing it?
4. What have you learned from this activity?

3. GREEN INTERNATIONAL DEVELOPMENT COOPERATION

Green cooperation, in shorter words, is established in order to promote bilateral cooperation in the field of ecological efficiency. Development of joint activities on the management of natural resources, including groundwater and minerals within specific areas, green areas, places and so on.

Denmark signed the **Comprehensive Strategic Partnership** with China in 2008. The Partnership offers a framework for collaboration and concentrates on the areas where China and Denmark concur to step up their collaboration. China and Denmark established a collaborative work program (China-Denmark Joint Work Program 2017-2020) to further advance their partnership. The main focus will be bilateral collaboration on putting the UN's global goals for sustainable development into action. It is anticipated that sustainable green transformation across all industries would be a key focal area.

The Guidelines' investment-related aspects are very consistent with the **nine suggestions of the Belt and Road Initiative International Green Development Coalition's** (BRIGC) Green Development Guidance for **BRI Projects** (Belt and Road Initiative), which was released in December 2020 and is supported by MEE. The Guidelines were released just a few weeks after the G7 announced the launch of the Build Back Better World (B3W) initiative, which is centered on sustainable development, and only a few weeks after 29 BRI countries announced the Initiative for a Green BRI Partnership, which highlighted the work of the BRIGC and the Green Investment Principles (GIP).

Examples of sustainable development - https://youtu.be/bD-zH_4RbyM

1.Study visit

The participants will be taken to a study visit to one competent authority that works in a field related to the general environmental legislation. They will be shown backstage” on how a legislation process looks like and details on how to write one.

2.Can we do it too?

After the study visit the participants will be split into 5 groups. Each group will try to write a legislation proposal based on the study visit they participated in. At the end, each group will present their proposals and the others will vote whether they would approve it or not.

Time:

- -30 mins to write the proposal briefly
- -15 to present it very shortly

Possible questions for debriefing:

1. How did you feel during this activity?
2. What have you learned?
3. What action seem doable for you?

4. BUYING SMART

Consumerism = “high levels of consumption” gained popularity in the 70’s, perceiving consumerism as a frivolous and selfish act, attributing a negative sense to the meaning of the word.

Consumption, or spending by individuals on consumer goods and services, is viewed in economics as the main engine of economic development and a key indicator of how productive a capitalist economy is. According to this definition of consumerism, governments should concentrate on encouraging consumer spending because it accounts for the largest share of GDP, or gross domestic product, in the majority of countries. GDP is the total market value of all the goods and services produced by a nation's economy during a given time period.

Tips on how to buy “smart”:

1. Do your research first: try to look for the best alternatives and even for the closest ones. If you shop locally, the carbon footprint would be lower compared to shopping from imported sources. Also keep in mind that some supermarkets offer discounted prices for items that are about to go bad. So if you know for sure you will soon use a certain item, you could try to buy a discounted one, instead of letting it go to waste;

1. Know the limits: try to stick only to what you need and do not buy extra things. If you manage to settle down the amounts of products that you need, this shouldn’t be a problem;

1. Be creative: repurpose the “waste” you created by using it for something else. If no edible option is available, perhaps you can try to make compost;

1. Plan ahead of time: you can try to organise yourself and plan your meals in advance. By doing this, you can have pretty exact measurements and quantities, thus avoiding waste or over-buying

Tips on how to buy “smart”:

5. Don’t be afraid to NOT use a brand: have you ever tried a product cheaper from a different brand? Even better if their packaging comes in a sustainable form and the products does its job properly.

6. STOP buying plastic: a lot of fruits and vegetables came in plastic covers, despite them having their own natural cover. Why would an apple need to be put in a cardboard box topped up with transparent foil while it has its own peel?

7. Make your own garden: if you have the appropriate space, you could even try to make your own little garden space at home. Some easy to grow herbs to start off would be: parsley, oregano, mint, thyme and dill.

How does it grow?

The participants will be split into 5 groups. Each group will get a certain type of plant that can be grown at home. They will all have to make a poster presenting the evolution of the plant, the needed materials and the environment it needs to be kept in.

Ideas for the plants: https://herbsathome.co/the-easiest-herbs-to-grow/

-30 mins to prepare

-15 mins to present

Possible questions for debriefing:

- How did you feel during this activity?
- What have you learned?
- What action can you take in your daily life in order to reduce your own “consumerism”?

5. GREEN WAYS OF TRANSPORTATION

Sustainable transportation is any mode of transportation that is 'green' and has a low environmental effect. Sustainable transportation is also about balancing our present and future requirements.

As everybody knows, there are a few green ways / eco-friendly means of transportations. The most famous one is the bicycle, whereas lately the electric scooter's popularity has started to rise, while walking has been the oldest one and still used by everybody. For some years now, people have also started carpooling, with apps being created to carpool with other people going in the same direction as you are.

Transportation is, unfortunately, one of the biggest polluters all over the world. With people all over the world choosing their own comfort via driving their own personal car everywhere, to always using cabs or using services for “private” transportation, to frequently taking flights instead of using other means of common transportation, pollution levels are rising, thus contributing to smog and poor air quality. The poorer the quality, the higher the risk of getting sick is.

The environmental implications of transportation are substantial since transportation consumes a considerable amount of energy and consumes the majority of the world's petroleum. This causes air pollution, including nitrous oxides and particles, and contributes significantly to global warming through carbon dioxide emissions. Road transport is the most significant contribution to global warming in the transportation sector.

Environmental rules in industrialised nations have lowered the pollution of individual vehicles. This has been compensated, however, by an increase in the number of automobiles on the road and increasing utilisation of each vehicle (an effect known as the Jevons paradox). Some routes for reducing road vehicle carbon emissions have been extensively researched.

Energy consumption and emissions vary greatly between modes, prompting environmentalists to advocate for a shift from air and road to rail and human-powered transportation, as well as increased transportation electrification and energy efficiency.

Leaving your vehicle at home and choosing for more ecologically responsible forms of transportation will help both you and the city. These are some examples:

- Traffic congestion has been reduced.
- Reduced air pollution and associated hazards like asthma
- Greenhouse gas emissions have been reduced.
- decreased reliance on nonrenewable energy sources
- Lower transportation costs
- Physical activity has increased, as has social engagement.
- Local business support and a thriving economy
- Better health and a higher quality of life

Let’s move

The participants will be asked to switch to public ways of transportation for a week while going to school or any other places. They will have to note down if the public transport is inaccessible for them, if it is too over-crowded at the time they are using it and all details that might seem relevant. After they do the small research, they will be split into groups based on the criteria of using the same route and will be asked to share and compare their results. After analysing all the results, they will try to come with solutions on how to decongest traffic, or how to make it more accessible and better for them in order to use it daily.

- 5 minutes to gather the groups
- 30 minutes to discuss in the groups
- 10 minutes to present their conclusions

Possible questions for debriefing:

1. How was the experience for you?
2. Did you manage to switch from personal vehicles to public transport? Was this a hard change for you?
3. Are you considering using public transport more?
4. How did this experience make you feel?
5. Is there anything missing from your public transport system that you consider should be available?

6. EXAMPLES OF GOOD PRACTICES

Here are some of the next examples of good practices that are already done by others:

- “Reduce, Reuse & Recycle” - a lot of people either properly select their trash to be recycled, or reuse some items.
- Disposable items - a lot of people have started bringing their own bags when shopping in order to avoid purchasing new ones.
- Household chemicals - some people even started doing their own cleaners and pesticides using natural and biodegradable chemicals. When cleaning surfaces, vinegar is a great help.
- Renewable energy - mainly people that live in houses have also opted to install solar panels. A couple of years ago, governments of some states supported individuals buying solar panels through some compensation, in order to get more and more people to transition either partially or fully to renewable energy.
- Public transport - people have started using more and more public transport instead of their own personal cars. This switch helps with the air pollution and clears out more of the streets, allowing the traffic to be lighter.
- Thrift shopping - lately it has become a trend to thrift shop or to buy from second hand stores.

Who did it before?

Participants will be asked to form a line. The facilitator will read eco-friendly change statements out loud such as „i could use toothpaste tablets instead of toothpaste coming from a tube” or „i could get a reusable water bottle and fill it up instead of always buying single use plastic ones" and so on. The participants will be asked to take a step forward if they believe they can do the said changes. At the end we can tell how easy it might seem for others to be eco friendly and how hard it would be for some. Discussions can be done after if the participants have any questions.

- 20-30 mins for the game
- 10-15 mins for the discussions

Possible questions for debriefing:

1.How did you feel while implementing the activity?

2.What have you learned from this activity?

3.Do you consider yourself different from the others based on your choices?

REFERENCES

1.WHY GREEN INDUSTRIAL POLICY SHOULD BE A PRIORITY AREA OF DEVELOPMENT COOPERATION - .https://kina.um.dk/en/about-denmark/green-diplomacy/green-cooperation
2.Interpretation of the "Green Development Guidelines for Foreign Investment and Cooperation" - https://greenfdc.org/interpretation-of-the-green-development-guidelines-for-foreign-investment-and-cooperation/
3.How the world embraced consumerism. - https://www.bbc.com/future/article/20210120-how-the-world-became-consumerist
4.Britannica - definition of consumerism - https://www.britannica.com/topic/consumerism
5.Consumer Protection - Guide to buying smart - https://www.consumerprotection.govt.nz/general-help/guide-to-buying-smart/
6.The easiest herbs to grow - https://herbsathome.co/the-easiest-herbs-to-grow/

https://greenactproject.eu/

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Association Walktogether

Project number: 2020-3-RO01-KA205-094853

SUSTAINABLE COMMUNITIES – ECO - CITIES

YOUNG PEOPLE'S HANDBOOK

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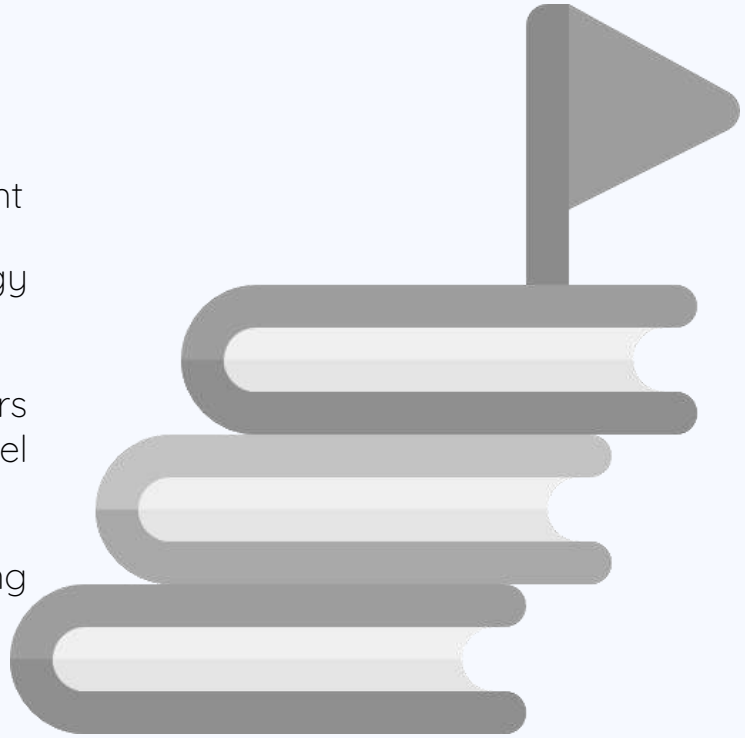
TOPICS

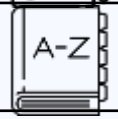
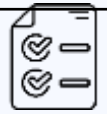
1. Eco-innovation & Entrepreneurship
2. Sustainable Urban Development
3. Alternative Transportation (emissions-free/electric vehicles and public transportation, alternative ways of transportation)
4. Waste Management and the 5R's
5. Water Management, Quality & Access
6. Examples of good practices

LEARNING GOALS

1. Introduce the learners to the environment benefits of sustainable products
2. Learning what some of the largest businesses are doing to reduce the footprint
3. The purpose of the lesson is to Inspire learners toward improving their energy efficiency.
4. To define the term “Sustainable Urban Development” and encourage learners to brainstorm of new practices, which can help their cities reach a higher level of sustainable urban development
5. To specify why sustainable transportation should be chosen rather than using a car.
6. To encourage the active use of alternative transportation.



KEY SYMBOLS

Symbols	Explanation
	Definitions
	Case study
	Additional Resources
	Tips
	Activities
	Reminder
	Video

1. ECO-INNOVATION & ENTREPRENEURSHIP

Eco-innovation has gained widespread acceptance as a means of enhancing many businesses' environmental performance and assisting them in the process of developing new products. Nowadays, sustainable packaging, innovative and 100% recyclable phone boxes, and many other environmentally friendly products are becoming increasingly popular. Hence, being able to differentiate between which products are good for the planet and which are harmful has become an essential skill.

DEFINITIONS

- This is the way to benefit by developing products or services, improving environmental sustainability, and using commercial strategies.
- The development of processes, products and services in ensuring human, economic, social and environmental sustainability.
- Innovative in production process which consent to a reduction of environmental risk and benefited to society and stakeholders.
- The concept refers to making substantial and measurable progress toward the objective of sustainable development by minimizing environmental effects and increasing environmental resilience.

ACTIVITIES & VIDEOS

Linked with Topic 1 – Lesson Plan

Video 1

Video 2

2. SUSTAINABLE URBAN DEVELOPMENT

Through sustainable urban development, the so-called ‘eco-cities’ are able to reduce the effects of climate change. Cities, which fall into this category, tackle global warming by:

- ***creating more green spaces within their territories***
- ***being able to use renewable energy to power itself***
- ***strictly controlling sources of pollution***
- ***encouraging ecological means of transportation over personal vehicles***

The benefits of those actions are better living conditions, economic growth, less waste of valuable resources, improved health and more.

DEFINITIONS

- Improving the quality of life in a city, including ecological, cultural, political, institutional, social and economic components without leaving a burden, e.g., the result of a reduced natural capital and an excessive local debt, on the future generations—and thus forming the sustainable city
- Promoting urban growth in line with the present needs without compromising the needs of future generations.

ACTIVITIES & MATERIALS

Linked with Topic 2 – Lesson Plan

Video

Article

3. ALTERNATIVE TRANSPORTATION

By definition, alternative transportation includes using “eco” vehicles with a low environmental impact. The dangerously high levels of carbon emissions, due to the increasing number of cars in the cities, has incited society to turn to less harmful to the environment means of transportation. Some of the main alternative transportation methods include walking, biking, taking the bus, tram or a train, carpooling, etc.

TIPS

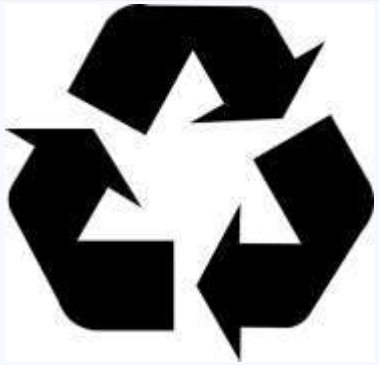
- Walking
- Biking
- Bus
- Mass Transit Rail
- Train
- Carpooling
- Car sharing
- Alternative fuel Vehicles
- Electric / Hybrid Vehicles

ACTIVITIES & MATERIALS

Linked with Topic 3 – Lesson Plan

Video

4. WASTE MANAGEMENT AND THE 5R'S



As a result of the population increase, the generation of waste is doubling with each day causing negative effects on the lives of many. Many waste slums have formed as a result of the accumulation of trash around the world, specifically around coasts. Single-use plastic materials, alongside other non-degradable components, present the biggest environmental threat. To tackle the issue, the method of the 5R's has been introduced. Essentially, the abbreviation has many interpretations, but generally stands for refuse, reduce, reuse, repurpose, and recycle.

HOW TO APPLY THE 5R'S

Applying the 5 R's to your business' waste management and recycling strategies can positively impact the outcome of your program by significantly reducing the amount of waste your business generates. In the 5 R's hierarchy, remember to treat recycling as a last resort after attempting to refuse, reduce, reuse, or repurpose.

REFUSE	Refuse: the first element of the 5 R's hierarchy. Learning to refuse waste can take some practice, but incorporating this step into your routine is the most effective way to minimize waste.
REDUCE	Reduce the use of harmful, wasteful, and non-recyclable products. Reducing dependency on these kinds of products results in less waste materials ending up in landfill and the associated negative environmental impacts.
REUSE	Single-use plastics have created a "throw-away" culture by normalizing consumer behavior of using materials once and then throwing them away. In an effort to reduce waste, reuse items instead of buying new ones.
REPURPOSE	For every item that can't be refused, reduced, or reused, try repurposing it. Many people in the green community refer to this method as upcycling. You may be surprised to learn how many common products serve more than one purpose.
RECYCLE	Once you've gone through all of the other R's, recycling is the most environmentally friendly waste disposal method. If your family doesn't already, start collecting cardboard, mixed paper products, commingled materials (plastics, aluminum, glass) and organics.

ACTIVITIES & MATERIALS

Linked with Topic 4 – Lesson Plan

Article

5. WATER MANAGEMENT, QUALITY & ACCESS

Definitions

Water quality refers to the chemical, physical, and biological characteristics of water based on the standards of its usage. It is most frequently used by reference to a set of standards against which compliance, generally achieved through treatment of the water, can be assessed.

Access to water according to the the United Nations General Assembly means:

The access to drinking water.

The access to sanitation and hygiene.

Water quality and the management of wastewater.

The efficient use of water resources.

Protection of water-related ecosystems.

ACTIVITIES & MATERIALS

Linked with Topic 5 – Lesson Plan

Video

6. GOOD PRACTICES IN THE FIELD OF GREEN CITIES

The goal is to define the best practice in the field of eco – cities around the world and to extract the most eligible resources and methods to apply at local level in order to improve our surrounding. The learners will be able to understand what 'good practices' are and why they are needed. Moreover, participation is such activities will be highly encouraged

Definition

There are several ways to define "good practices." However, a theme that runs across most definitions is that they all refer to tactics, methods, and/or activities that have been demonstrated via study and assessment to be reliable in producing the intended results and to be successful, efficient, sustainable, and/or transferrable.

EXAMPLES OF GOOD PRACTICES

GP 1- Incentives for Electric Vehicles in the EU

Most EU member states have begun to provide up to 5000 EUR as financial support to citizen for electric vehicle purchases. Moreover, in most parts of the EU, EV are a subject from partial to full exemption of some mandatory taxes.

GP 2- 2LIFES projects by Interreg Europe

"The project is meant to be an instrument to help boost re-use through public policies… 2LIFES focuses exclusively on re-use and more specifically on re-use activities promoted by public administrations – something pending as it is usually promoted by the third sector."

GP 3- WWF's charity swimming challenge

Swim so that they can swim too is the name of WWF Bulgaria's challenge aiming at supporting the protection of Bulgarian rivers' water quality and their inhabitants.

ACTIVITIES & MATERIALS

Linked with Topic 6 – Lesson Plan

Article

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BRIGADA DO MAR

Project number: 2020-3-RO01-KA205-094853

GREENACT MOVEMENT: BECOME AN ACTIVE AGENT FOR THE ENVIRONMENT

YOUNG PEOPLE'S HANDBOOK

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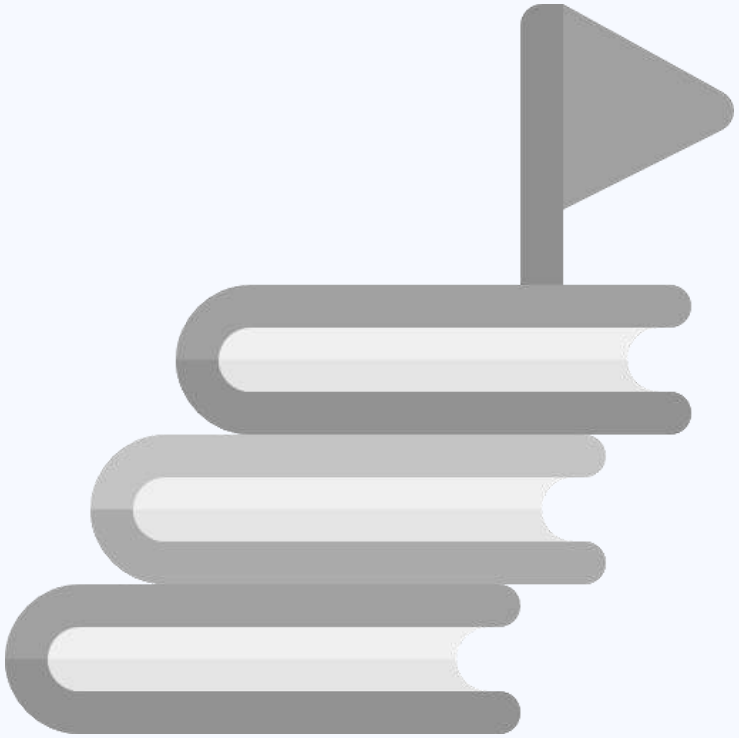
TOPICS

1. Community initiative and action
2. NGOs climate action
3. Community environmental awareness
4. Fundraising and Sponsorship
5. CSR (Corporate Social Responsibility)
6. Examples of good practices

LEARNING GOALS

1. To demonstrate the importance of public initiatives, motivate people to become active agents for the environment and identify the main NGOs at international, European and national levels;
2. To demonstrate the vital role of NGOs in environmental and biodiversity protection and climate action;
3. To emphasize the importance of developing public environmental awareness and learning how to mobilize knowledge and resources within communities.
4. To have a deeper understanding of how corporations can take social responsibility into action;



KEY SYMBOLS

Symbols	Explanation
	Definitions
	Case study
	Additional Resources
	Tips
	Activities
	Reminder
	Video

1. COMMUNITY INITIATIVE AND ACTION

- Community initiatives, civil society movements and actions can significantly impact raising awareness about environmental protection.

- This topic aims to:
  - Demonstrate how important community initiatives and activities, even individuals, are in environmental protection;
  - How they can be crucial as agents of change, educating the community, influencing lifestyles or even demanding political laws and changes in favour of the environment and all the living beings that depend on it.

1. COMMUNITY INITIATIVE AND ACTION

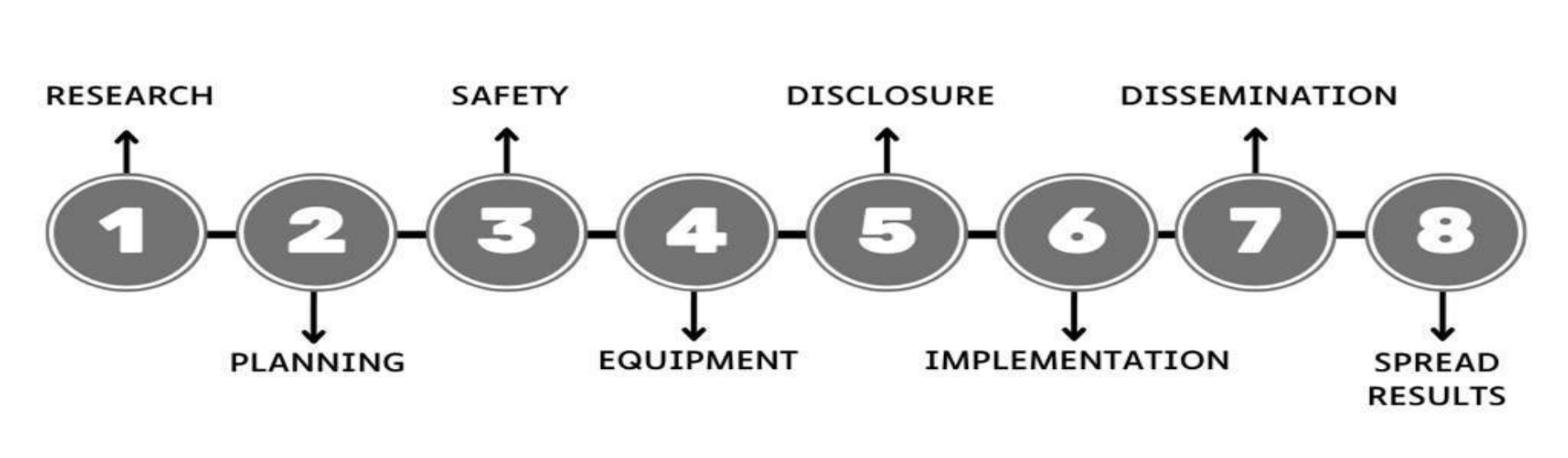
Activity 1: Team-building / Brainstorming

In small groups, participants will brainstorm on what to take into consideration for creating a clean-up campaign. In order for them to have a line of thought, the facilitators will decide and adjust, based on the steps below, how and how much information, guidelines or hits they will give to the groups.

The goal for each group is to go through the processes of a campaign, before, during and after, and write down their conclusions. In the end, each one presents their results, in the way they would prefer, and the facilitators will assist in an open discussion to summarise the most important aspects of each step of a clean-up campaign.

1. COMMUNITY INITIATIVE AND ACTION

Possible steps for creating a clean-up campaign:



1. COMMUNITY INITIATIVE AND ACTION

Questions for debriefing

- How did the activity go?
- What worked well in the discussion process? And what could be improved?
- Was everyone able to share their opinions?
- What did you learn from it?
- What did you like? And dislike?
- Do you feel ready to create our own campaign?

1. COMMUNITY INITIATIVE AND ACTION

Activity 2: Clean-up Campaign

In this activity, participants will have the opportunity to take part in a clean-up campaign. The goals are that participants understand how a campaign is implemented, realise its impact, and feel motivated to become active and develop/support initiatives that help the environment.

The facilitators will be in charge of selecting the place, preparing the activity, and ensuring safety throughout the session.

1. COMMUNITY INITIATIVE AND ACTION

Questions for debriefing

- How was the experience for you?
- How did you feel?
- What did go well in the cleanup? And what did not?
- Can you see the differences in the surroundings?
- What did you learn from the activity?
- What are the main takeaways for you from this activity?
- What will you do differently from now on?

2. NGOs' CLIMATE ACTION

- ➔ The objective of this topic is to demonstrate the work Non-Governmental Organisations have been developing for the environment.

- ➔ Thus, demonstrate the vital impact these Organisations have around the world:
  - ◆ fighting climate action;
  - ◆ preserving and protecting important natural areas;
  - ◆ preserving and protecting under-threat species;
  - ◆ raising awareness for environmental problems;
  - ◆ educating people and institutions on environmental protection.

2. NGOs' CLIMATE ACTION

Definitions

NGO (Non-Governmental Organisation) - an entity, typically nonprofit, that is independent of any government. These organisations can work on social, political, ethnic, environmental or other areas or issues. They often rely on voluntary work.

Biodiversity - refers to the variety of living species on Earth, including plants, animals, bacteria, and fungi.

Deforestation - the process of cutting down or burning trees beyond the ability of the forest to restore itself. The main reasons for deforestation are agricultural expansion, wood extraction, and infrastructure expansion, such as roads and urbanisation.

2. NGOs' CLIMATE ACTION

Definitions

Pollution - the process of introducing harmful materials into the environment. These materials - the pollutants - are responsible for changes in the quality of air, water, and land.

Ghost gear - any discarded, lost, or abandoned fishing gear in the marine environment, that continues to fish and trap animals, entangle and potentially kill marine life.

Carbon emissions - the release of gases into the atmosphere, contributing to the greenhouse effect, commonly associated with Carbon Dioxide (CO2) emissions which is an anthropogenic (produced by human activities) greenhouse gas that results from the use of fossil fuels and from deforestation.

2. NGOs' CLIMATE ACTION

Definitions

Carbon emissions - the release of gases into the atmosphere, contributing to the greenhouse effect, commonly associated with Carbon Dioxide (CO_2) emissions.

Greenhouse gas - the gases (natural or an anthropogenic (man-made)) in the Earth's atmosphere that produce the greenhouse effect.

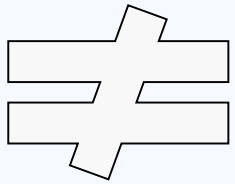
Greenhouse effect - A natural phenomenon that results from releasing greenhouse gases (GHGs) into the atmosphere, making life on Earth possible. However, the GHGs related to human activities compromise the balance of climate.

2. NGOs' CLIMATE ACTION

Definitions

<u>Climate Change</u> - Climate change refers to long-term shifts in temperatures and weather patterns. Can be:

- Natural;
- due to human activities (burning of fossil fuels)



<u>Global warming</u> - the long-term heating of Earth's climate system.

Global warming is the cause of climate change.

2. NGOs' CLIMATE ACTION

Definitions

Plastic pollution - also known as plastic waste is the accumulation of plastic objects in the planet's environments, that modifies habitats and affects wildlife, and, ultimately, humans.

≠

Microplastics - smaller plastic particles that result from the degradation of plastic waste, normally made by natural elements and processes like sunlight, wind, or wave action. Microplastics are spread throughout the water column and have been found in every corner of the globe.

2. NGOs' CLIMATE ACTION

Activity: Let's Quiz It!

1) Short quiz about some of the main environmental problems
2) Open discussion based on the answers
3) Discussion in small groups (3-4 people) about NGOs they know fighting climate change
4) Highlight the main findings in the whole group
5) Debriefing

LInk for the Quiz

2. NGOs' CLIMATE ACTION

Questions for debriefing

- How did the activity go?
- What did you learn from it?
- Which terms/definitions were new to you?
- Do you feel more aware of the role of NGOs in climate action?
- Did you find out about new NGOs? Are they in your country/community?
- Would you be able to tell a friend of yours about one of the organisations you talked about today?

3. COMMUNITY ENVIRONMENTAL AWARENESS

- The goal is to emphasise the importance of developing public environmental awareness, as an important factor in increasing enthusiasm, motivation and support, stimulating self-mobilisation and action, and mobilising knowledge and resources within communities.

- This topic aims to:
  - To emphasise the importance of developing public environmental awareness;
  - To learn how to mobilise knowledge and resources within communities.

3. COMMUNITY ENVIRONMENTAL AWARENESS

Activity: Communicating for Change

Participants are given a lecture about communication actions. Then they are separated into small groups where they will be asked to create a communication action that raises the community's environmental awareness, which will go on for 25 minutes. Then, the facilitators gather the group in a big circle and invite each small group to present their communication action, which will go on for 15 minutes. Finally, there are 15 minutes to discuss the challenges of implementing said communication actions. The activity ends with a debriefing section.

3. COMMUNITY ENVIRONMENTAL AWARENESS

Questions for debriefing

- How did the activity go?
- What did you learn from it?
- Which terms/definitions were new to you?
- Do you feel more aware of the role of communication in climate action?
- Do you feel motivated to implement it?

4. FUNDRAISING & SPONSORSHIP

- The topic brings attention to methods of supporting NGOs activities or any other project and shows the importance of sponsorship in environmental action. Private and public funding is crucial for most environmental projects and initiatives around the world.

- This topic aims to:
  - To understand the importance of Sponsorship in regard to environmental action;
  - To discover methods of funding NGOs activities through public and private entities.

4. FUNDRAISING & SPONSORSHIP

Definitions

Sponsorship: Sponsoring something is financially supporting an event, activity, person, or organisation or providing products or services. The individual or group that offers the support, similar to a benefactor, is known as the sponsor.

Fund: Funding is providing money or other resources to finance a specific purpose, program, or project.

4. FUNDRAISING & SPONSORSHIP

Activity: An action for CHANGE

Participants are given a lecture about sponsorship and funding for climate change action. Then they are separated into small groups where they will be asked to create a climate action with a fixed budget and research of sponsors, which will go on for 25 minutes.

Then, the facilitators gather the group in a big circle and invite each small group to present their communication activities, which will go on for 15 minutes.The activity ends with a debriefing section.

4. FUNDRAISING & SPONSORSHIP

Questions for debriefing

- How did the activity go?
- What did you learn from it?
- Which terms/definitions were new to you?
- Do you feel more aware of the role of sponsorship and funding in climate action?
- Do you feel motivated to implement it?

5. CSR (CORPORATE SOCIAL RESPONSIBILITY)

➔ The focus will be on the principles of corporate social responsibility, including sustainability, responsibility and resources, and on demonstrating ways in which entities can perform exemplary on their Corporate Social Responsibility.

➔ This topic aims to:

- ◆ To decode the term Corporate Social Responsibility, and understand its importance and role at the cooperative level of different entities;
- ◆ Have a deeper understanding of how corporations can take social responsibility into action.

5. CSR (CORPORATE SOCIAL RESPONSIBILITY)

Definitions

Corporate Social Responsibility is based on changing behaviour or certain types of **actions** that companies decide to take to please their public, which can be internal or external.

This should be an action taken only by the company's own choice, and not an action caused by external influences.

In other words, it is what the company gives back to its community by **positively impacting the environment and with gestures of goodwill** without letting profits come first.

However, the strategies that companies put in place must ensure that the company's operations are ethical and beneficial to society.

5. CSR (CORPORATE SOCIAL RESPONSIBILITY)

Types of Corporate Social Responsibility

1. Environmental Responsibility

For corporate social responsibility, **environmental commitment** is important.

Actions on same environmental responsibility, can take different forms depending on the type of business, its size and industry, but can range from choosing to use environmentally friendly materials, to the use of renewable energy, or even include volunteer actions.

5. CSR (CORPORATE SOCIAL RESPONSIBILITY)

Types of Corporate Social Responsibility

2. Ethical Responsibility

To be ethically responsible at the corporate level is to ensure that the practices adopted in the organization, in relation to its employees, stakeholders and customers, and the business environment, are done ethically and with respect.

It includes internal and external policies that ensure that people are treated with respect and receive benefits in the workplace, such as ensuring a higher minimum wage, that company materials are obtained from an ethical source, that employees receive equal pay and other benefits that employees deserve for their work.

5. CSR (CORPORATE SOCIAL RESPONSIBILITY)

Types of Corporate Social Responsibility

3. Philanthropic Responsibility

When businesses and companies contribute and donate to their community, whether through causes or donations that align with their mission, they are in themselves following their philanthropic responsibility.

Actions of philanthropic responsibility can range from as small-scale as a company helping a non-profit organisation to as large-scale as donating perceptions of the company's annual profits to a cause that is aligned with the company's mission.

5. CSR (CORPORATE SOCIAL RESPONSIBILITY)

Types of Corporate Social Responsibility

4. Economic Responsibility

As far as economic responsibility is concerned, in financial decision-making, the prioritisation of doing good, rather than just making money, is taken into consideration, and it is for this reason that this type of corporate social responsibility is linked with the other types mentioned above.

This may mean that the company when making decisions takes into account the destination of its actions, for example, when signing a contract the company may choose a supplier that uses sustainable materials even if the purchase cost is higher.

5. CSR (CORPORATE SOCIAL RESPONSIBILITY)

The Benefits of Corporate Social Responsibility

- ➔ Improve labour relations and well-being that have a positive impact on employees and their environment;
- ➔ Make employees feel more motivated and committed to the company, which in turn will lead to an increase in productivity;
- ➔ Contribute to companies being able to retain more talent within the organisation;
- ➔ Represent a win-win situation for both the company and the employees;
- ➔ Contributing to a more sustainable world that treats its employees well, is committed to equal pay, and is more ethical.

5. CSR (CORPORATE SOCIAL RESPONSIBILITY)

Activity: Study Visit to a Corporation with CSR initiatives

This will be implemented using the non-classroom method. The activity should be decided by a Professor or Youth Working that needs to do a plan for the Study Visit.

The students will learn, before the visit (or even in the first part of the visit in a meeting room e.g.), the CSR initiatives of the organization they will visit, in order to think about suggestions for improvements and new ideas for the CSR Department they are visiting. After they will have a moment with company staff to sketch ideas or suggestions for their initiatives. This activity is designed to last at least 200 minutes.

5. CSR (CORPORATE SOCIAL RESPONSIBILITY)

Questions for debriefing

- What CSR action did you identify that employees join the most?
- Do you think that all medium/big companies should have CSR departments? If yes, why?
- What CSR practices do you find that please you the most?
- Did you find any cases that Corporate Social Responsibility that should have been in place/was missing? Can you specify the case?

6. EXAMPLES OF GOOD PRACTICES

1) Community Initiative and action

Projeto Gea

The Trash Traveler

6. EXAMPLES OF GOOD PRACTICES

2) NGOs' Climate Action - Brigada do Mar

6. EXAMPLES OF GOOD PRACTICES

3) Community environmental awareness - Blue School Programme

6. EXAMPLES OF GOOD PRACTICES

4) Sponsorship - Vodafone Portuguese Foundation & Lidl Portugal in Bandeira Azul (Blue Flag) Programme

Fundação Vodafone Portugal

6. EXAMPLES OF GOOD PRACTICES

5) Corporate Social Responsibility - Delta Cafés and EDP Foundation

REFERENCES

Community initiative and action:

https://www.instagram.com/projetogea/

NGO's Climate Action:

https://www.nationalgeographic.org/society/
https://www.rainforest-alliance.org/issues/forests/
https://www.worldwildlife.org/initiatives/
https://www.undp.org/sustainable-development-goals#
https://oceanservice.noaa.gov/facts/ghostfishing.html#
https://www.myclimate.org/information/faq/faq-detail/what-are-greenhouse-gases/

Corporate Social Responsibility:

https://drive.google.com/file/d/1DC2vyS46Ax85mAlqst-awaXbC8PyFbF-/view?usp=sharing
https://www.pacificoaks.edu/voices/business/breaking-down-the-4-types-of-corporate-social-responsibility/

REFERENCES

Good Examples:

https://www.instagram.com/projetogea/
https://theplastichike.org/
https://www.facebook.com/thetrashtraveler1/
https://www.facebook.com/brigadadomar
https://escolaazul.pt/en/escola-azul/o-que-e
https://www.deltacafes.com/en/sustainability/social-responsibility
https://bandeiraazul.abae.pt/
https://www.vodafone.com/sustainable-business/our-contribution-to-un-sdgs
https://institucional.lidl.pt/sustentabilidade/medidas/subitems/paginas-medidas/transformar

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TAVO EUROPA

Project number: 2020-3-RO01-KA205-094853

EUROPEAN UNION AND NATIONAL ENVIRONMENTAL POLICIES

YOUNG PEOPLE'S HANDBOOK

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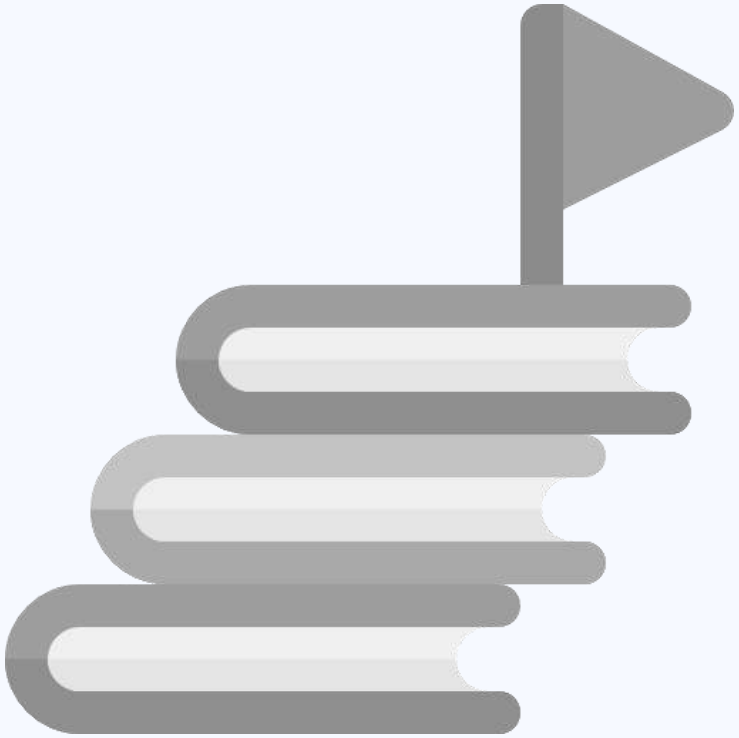
TOPICS

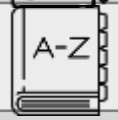
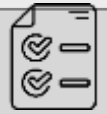
1. Environmental protection policies.
2. Environmental governance.
3. Environmental laws, policies and legislations.
4. European international environmental agreements and goals.
5. Examples of good practices.

LEARNING GOALS

- This module will provide a basic understanding of environmental policies at the European Union and national level. Environmental protection policies, legal frameworks, and good practices will be presented, demonstrating the efforts of governments and societies to achieve effective environmental protection and current challenges. The provided information will be useful for active environmental action.



KEY SYMBOLS

Symbols	Explanation
	Definitions
	Case study
	Additional Resources
	Tips
	Activities
	Reminder
	Video

1. ENVIRONMENTAL PROTECTION POLICIES

Environmental protection is the practice of protecting the natural environment by individuals, organizations and governments. Its objectives are to conserve natural resources and the existing natural environment and, where possible, to repair damage and reverse trends.

The countries of the European Union have agreed to jointly achieve the following goals:

- To protect, maintain and nurture the EU's natural capital,
- To make the EU economy a green and competitive, resource-efficient and low-carbon economy,
- To protect EU citizens from negative environmental impacts and risks to health and well-being.

Tools and procedures to achieve the objectives:

1) environment action programms (8th EAP),

2) horizontal strategies (Sustainable Development Strategy (SDS), Biodiversity Strategy for 2030, Farm to Fork Strategy),

3) international environmental cooperation (2030 Agenda for Sustainable Development, the Paris Agreement on Climate Change and the Sendai Framework for Disaster Risk Reduction, the Convention on International Trade in Endangered Species (CITES),

4) environmental impact assessment and public participation (environmental impact assessment – EIA, strategic environmental assessment – SEA),

5) tools for implementation, enforcement, and monitoring (The European Union Network for the Implementation and Enforcement of Environmental Law – IMPEL, Environmental Implementation Review, the European Environment Agency – EEA, the European Earth Observation Programme – Copernicus, etc.).

Q&A on environmental protection and climate policy - EU explained

https://www.youtube.com/watch?v=0qcnzKTSQ50

Explore your area! Environment reflections

- Groups of 3-4 people.
- Aim is to identify the environmental protection problem in the area.
- 30 minutes for monitoring.
- 30 minutes for discussing.

Debriefing questions:

1. What environmental violations do I notice around me?
2. Who owns the territory and who is legally responsible for its maintenance?
3. Which institutions in my country are responsible for environmental protection?
4. How can I contribute to changing the situation?
5. What could be done in general to change the situation both in my country and in the EU?
6. What could be the main obstacles preventing the situation from changing?

2. ENVIRONMENTAL GOVERNANCE

Environmental governance includes policy, rules and norms that govern human behavior and it also addresses who makes decisions, how decisions are made and carried out, the scientific information needed for decision-making and how the public and major stakeholders can participate in the decision-making.

The European Commision‘s assessment framework for environmental governance covering these dimensions:

- Transparency.
- Participation.
- Access to justice.
- Compliance assurance/accountability.
- Effectiveness/efficiency.

It is still an ongoing process.

- The European Commission released the first edition of the Environmental Implementation Review (EIR) in February 2017. The Commission continues to develop its approach to assessing environmental implementation and has commissioned this initial framework for an assessment of environmental governance.

Development of an assessment framework on environmental governance in the EU Member States, final report, May 2019

https://ec.europa.eu/environment/environmental_governance/pdf/development_assessment_framework_environmental_governance.pdf

Learn about your country in the context of the European Union! Group discussion

The goal is to discover and collect data related to the home country.

Debriefing questions:

1. What environmental governance actions do I notice in my daily life?

2. How do member states coordinate their actions with the EU in order to achieve adequate environmental protection?

3. How does my country look in the general context?

4. What environmental protection challenges seem to be the most important?

5. What breakthroughs have already been achieved or can be achieved in the near future in my country?

3. ENVIRONMENTAL LAWS, POLICIES, AND LEGISLATIONS

The Single European Act of 1987 introduced a new 'Environment Title', which provided the first legal basis for a common environment policy with the aims of preserving the quality of the environment, protecting human health, and ensuring rational use of natural resources.

EU Environmental policy is being formulated in environment action programmes since early 1970s:

1st – Programme of Action of the European Communities on the Environment (1973-1976)

2nd – European Community Action Programme on the Environment (1977-1981)

3rd – Action Programme of the European Communities on the Environment (1982-1986)

4th – EEC Fourth Environmental Action Programme (1987-1992)

5th – Community programme of policy and action in relation to the environment and sustainable development (1993-2000)

6th – the Sixth Community Environment Action Programme (2002-2012)

7th – the Seventh Environment Action Programme (2014-2020)

The 8th Environment Action Programme till 2030:

- The document supports the environment and climate action objectives of the European Green Deal.
- 2050 vision: we want to ensure wellbeing for all, while staying within the planetary boundaries.
- Calls for active engagement of all stakeholders at all levels of governance, to ensure that EU climate and environment laws are effectively implemented.
- Forms the EU's basis for achieving the United Nation's 2030 Agenda and its Sustainable Development Goals.
- Aims to accelerate the transition to a climate-neutral, resource-efficient and regenerative economy, which gives back to the planet more than it takes.
- Recognises that human wellbeing and prosperity depend on the healthy ecosystems within which we operate.

EU legislation in force concerning the environment:

- Nature and biodiversity.
- Integrated pollution control.
- Air pollution.
- Water pollution.
- Noise pollution.
- Environmental impact assessment.
- Genetically modified organisms.

Environmental Regulatory Framework – Legislation:

- Covers a vast landscape of different topics enacted over many decades.
- The key regimes that aim to protect the environment are established by a mix of Regulations, which apply directly in member states, and Directives, which set the framework in the relevant area but are then transposed by member states into national law (giving member states scope to implement the framework in a manner suitable for the national context).
- The European Commission issues a significant amount of delegated legislation, which provides more detailed implementation rules and guidance.

The main environmental regimes and key associated legislation include:

- Integrated Pollution Prevention and Control (IPPC): Industrial Emissions Directive (IED) (2010/75/EU).
- Air quality framework, which establishes ambient air quality objectives as well as controls on source air emissions: Air Quality Directive (2008/50/EC) and various associated Directives.
- Water framework, which seeks to manage water resources, improve water quality, prevent water pollution and generally protect the water environment: Water Framework Directive (2000/60/EC) and various related Directives, and the IED.
- Waste framework, which seeks the reduction of waste and appropriate management of waste including hazardous waste, and places controls on shipments of waste: Waste Framework Directive (2008/98/EC).

Other key regimes include:

- Environmental impact assessment (EIA): Environmental Impact Assessment Directive (2011/92/EU).
- Nature and biodiversity protection: Birds Directive (2009/147/EC) and Habitats Directive (92/43/EEC).
- Environmental liability for environmental damage: Environmental Liability Directive (2004/35/EC).
- Energy and climate framework:
- the Effort Sharing legislation (which forms part of a set of policies and measures on climate change and energy) (Effort Sharing Decision (406/2009/EC) and Effort Sharing Regulation ((EU) 2018/842);
- Emissions Trading Directive (2003/87/EC);
- Renewable Energy Directive (2009/28/EC) and (Renewable Energy Directive II) (RED II) ((EU) 2018/2001) (together, the Renewable Energy Directives);
- Energy Efficiency Directive (2012/27/EU).

Regulatory Authorities

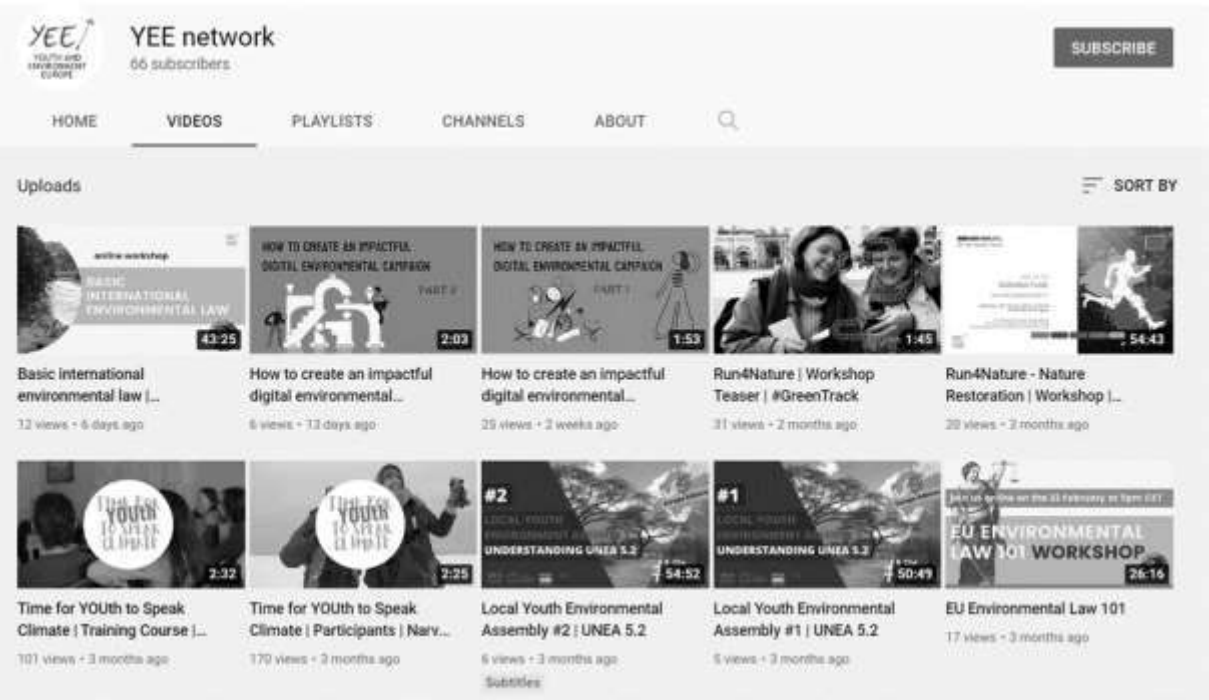
- Member state bodies act as regulatory authorities in relation to matters covered by EU law.
- EU bodies act as regulator in certain respects in relation to various centralised EU environmental regimes.

Financial support for environmental projects:

- LIFE 2014-2020 is an EU co-financing program that aims to contribute to the development, implementation and updating of EU environmental policy and environmental legislation.
- LIFE aims to facilitate the integration of the environment into other policy areas and to achieve sustainable development in the EU. The LIFE 2014-2020 regulation entered into force in December 2013.
- 2 sub-programmes: Environment and Climate Action.
- The environment sub-programme covers environmental protection and resource efficiency; nature and biodiversity; environmental management and information.
- Climate Action includes climate change mitigation; adaptation to climate change; climate management, and information.

Youth and Environment Europe – YouTube channel

https://www.youtube.com/user/YEEPrague



Attend online workshop!

https://www.youtube.com/watch?v=JEcOrdhTiJo

Debriefing questions:

1. Which environmental laws of the European Union are best known?
2. Which environmental laws of the European Union should be presented more widely?
3. How does knowledge of the legal framework change attitudes towards the environment?
4. What punishments for disregarding environmental requirements could be the most effective?
5. Do I know about workshops on the topic of environmental protection taking place in my country?

4. EUROPEAN INTERNATIONAL ENVIRONMENTAL AGREEMENTS AND GOALS

The European Green Deal presents a roadmap for making the EU's economy sustainable by turning climate and environmental challenges into opportunities across all policy areas and making the transition just and inclusive for all. The European Green Deal aims to boost the efficient use of resources by moving to a clean, circular economy and stop climate change, revert biodiversity loss and cut pollution. It outlines investments needed and financing tools available, and explains how to ensure a just and inclusive transition. The European Green Deal covers all sectors of the economy, notably transport, energy, agriculture, buildings, and industries such as steel, cement, ICT, textiles and chemicals.

The Sustainable Development Goals (SDGs), also known as the Global Goals, were adopted by the United Nations in 2015 as a universal call to action to end poverty, protect the planet, and ensure that by 2030 all people enjoy peace and prosperity.

The European Union's Green Deal, Explained

https://www.youtube.com/watch?v=gShVdPOp1D4

Based on the European Green Deal, it has the following six priority objectives:

- Until 2030 to achieve the goal of reducing greenhouse gas emissions and neutralizing the climate by 2050.
- Increase adaptive capacity, strengthen resilience and reduce vulnerability to climate change
- Progress towards a renewable growth model, decoupling economic growth from resource use and environmental degradation and accelerating the transition to a circular economy.
- To achieve zero pollution, including to air, water and soil, and to protect the health and well-being of Europeans.
- Protect, conserve and restore biodiversity and strengthen natural capital (in particular air, water, soil and forest, freshwater, wetland and marine ecosystems).
- Reduce production and consumption-related pressures on the environment and climate (especially in the areas of energy, industrial development, buildings and infrastructure, mobility and the food system).

Main challenges in implementing The Green Deal:

- Allocation of financial resources both at the level of the European Union and Member States.
- Attracting private funds for program implementation.
- Global problems in the financial sector.
- Agreement between member states and societies when making decisions.
- Acceptance and regulation of various restrictions.
- Finding compromises with other continents.

Sustainable Development Goals explained with 3 useful tips | Environment SDG Sustainability

https://www.youtube.com/watch?v=qfOgdj4Okdw

Main priorities, according to the United Nations:

- Accelerate progress on the Millennium Development Goals, including reducing mortality, reducing social exclusion and others.
- Address climate change, while facilitating mitigation and adaptation action on the ground, promoting climate financing, executing agreeements on reducing emissions, and so on.
- Force consensus around a post-2015 sustainable development framework and implement it, meaning defining a new generation of sustainable development goals and mobilizing the UN system to support relevant strategies, etc.

The main challenges of sustainable development:

- Lack of financing from state budgets and little attraction of private funds.
- Disengagement from countries experiencing armed conflicts and other disturbances.
- Consequences of natural disasters.
- Corruption flourishing in some countries.
- Little involvement of some state structures.

Citizens‘ role in environmental agreements:

- Pressure on governments.
- Personal initiative.
- Allocation of personal funds.
- Contribution to raising more conscious generations.

Debriefing questions:

1. What changes caused by the green deal can be observed in everyday life?

2. Which sustainable development goals seem to be the easiest to achieve and which are the most difficult?

3. How can the state and citizens work together to achieve the set goals?

4. What kind of environment and its protection can be imagined in ten years?

5. How to maintain attention to environmental protection in the face of other global challenges?

5. EXAMPLES OF GOOD PRACTICES

Find good practices in your area!

There are many examples of good practices in Europe that show the conscious and responsible behavior of governments and society towards nature. However, we do not always recognize these practices and are aware of them. A visit to a local institution or to the organizers of various initiatives will significantly broaden understanding and encourage involvement in meaningful activities.

Debriefing questions:

1. Is the activity of this institution/initiative widely known in my environment?
2. Which goals of the institution/initiative are considered short-term and which long-term?
3. What resources are most lacking to achieve the goals?
4. How can you personally contribute to the ongoing activities?
5. Does the activity of this institution/initiative have analogues in other countries?

REFERENCES

1. *Autodesk | Meet the net zero heroes*. (n.d.). Retrieved July 4, 2022, from https://www.autodesk.eu/industry/accelerate-sustainability?mktvar002=5030647%7CSEM%7C%7Bcampaignid%7D%7C%7Badgroupid%7D%7C%7BTargetId%7D&ef_id=CjwKCAjwoduRBhA4EiwACL5RP0bcOnqYtiLIO_XXkO4mbh_W70pPo00ctg10csgpY2aTVA8qybqsLxoC_hkQAvD_BwE:G:s&s_kwcid=AL!11172!3!564217852012!p!!g!!environment!12463058871!125005697450&gclid=CjwKCAjwoduRBhA4EiwACL5RP0bcOnqYtiLIO_XXkO4mbh_W70pPo00ctg10csgpY2aTVA8qybqsLxoC_hkQAvD_BwE
2. *Best environmental management practice*. (n.d.). Retrieved July 4, 2022, from https://joint-research-centre.ec.europa.eu/scientific-activities-z/best-environmental-management-practice_en
3. *Citizens Information*. (n.d.). Retrieved July 4, 2022, from https://www.citizensinformation.ie/en/
4. *EC directives and legislation | Scottish Environment Protection Agency (SEPA)*. (n.d.). Retrieved July 4, 2022, from https://www.sepa.org.uk/regulations/how-we-regulate/ec-directives-and-legislation/
5. *Environment policy: general principles and basic framework | Fact Sheets on the European Union | European Parliament*. (n.d.). Retrieved July 4, 2022, from https://www.europarl.europa.eu/factsheets/en/sheet/71/environment-policy-general-principles-and-basic-framework
6. *Environmental governance assessment - Environment - European Commission*. (n.d.). Retrieved July 4, 2022, from https://ec.europa.eu/environment/environmental_governance/assessment/index_en.htm
7. *EU Policies & Regulations - WECOOP*. (n.d.). Retrieved July 4, 2022, from https://wecoop.eu/regional-knowledge-centre/eu-policies-regulations/
8. *European environmental law*. (n.d.). Retrieved July 4, 2022, from https://www.citizensinformation.ie/en/environment/environment_and_the_law/eu_environmental_law.html
9. *Good practices on sustainable development in protected areas*. (n.d.). Retrieved July 4, 2022, from https://www.europarc.org/library/previous-projects/impact-interreg-europe/good-practices-on-sustainable-development-protected-areas/
10. *GUIDE OF GOOD ENVIRONMENTAL PRACTICES*. (2017).
11. *List of the environmental legislation currently covered by the Fitness Check on Monitoring and Reporting*. (n.d.).
12. *Priorities: Sustainable development | United Nations Secretary-General*. (n.d.). Retrieved July 4, 2022, from https://www.un.org/sg/en/priorities/sustainable_development.shtml
13. *Pristatyta ES šalių agrarinės aplinkosaugos priemonių gerosios praktikos analizė - Naturalit*. (n.d.). Retrieved July 4, 2022, from https://naturalit.lt/pristatyta-es-saliu-agrarines-aplinkosaugos-priemoniu-gerosios-praktikos-analize/
14. *Sustainable Development and its Challenges in Developing Countries - IYNF - International Young Naturefriends*. (n.d.). Retrieved July 4, 2022, from https://www.iynf.org/2018/08/a-guide-to-sustainable-development-and-its-challenges-in-developing-countries/
15. *Sustainable Development Goals | unfoundation.org*. (n.d.). Retrieved July 4, 2022, from https://unfoundation.org/what-we-do/issues/sustainable-development-goals/?gclid=Cj0KCQjwn4qWBhCvARIsAFNAMiiPb__BUaASUMn-kTNELL0U6PkH-gWECNFOxMPmUePtZel-12BUK3AaAiN8EALw_wcB
16. *THE 17 GOALS | Sustainable Development*. (n.d.). Retrieved July 4, 2022, from https://sdgs.un.org/goals
17. *The challenges of circularity in the EU Green Deal: why is industrial development in the EaP region crucial to achieve a just transition towards industry 5.0? - EU NEIGHBOURS east*. (n.d.). Retrieved July 4, 2022, from https://euneighbourseast.eu/young-european-ambassadors/blog/the-challenges-of-circularity-in-the-eu-green-deal-why-is-industrial-development-in-the-eap-region-crucial-to-achieve-a-just-transition-towards-industry-5-0/
18. *The EU Green Deal – a roadmap to sustainable economies*. (n.d.). Retrieved July 4, 2022, from https://www.switchtogreen.eu/the-eu-green-deal-promoting-a-green-notable-circular-economy/
19. *The Global Movement for Our Children's Future- World Top 20 Project*. (n.d.). Retrieved July 4, 2022, from https://worldtop20.org/global-movement?gclid=CjwKCAjwoduRBhA4EiwACL5RP_e8rpp7f5_BrKyJIMoqVVxeMvRQVsI6s6hgdCQLpHDP9fxUhRSLVxoC9AgQAvD_BwE
20. *Three major challenges set by the European Green Deal - LifeGate*. (n.d.). Retrieved July 4, 2022, from https://www.lifegate.com/european-green-deal

https://greenactproject.eu/

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greenACT

EMPHASYS CENTRE

Project number: 2020-3-RO01-KA205-094853

CLIMATE CHANGE

YOUNG PEOPLE'S HANDBOOK

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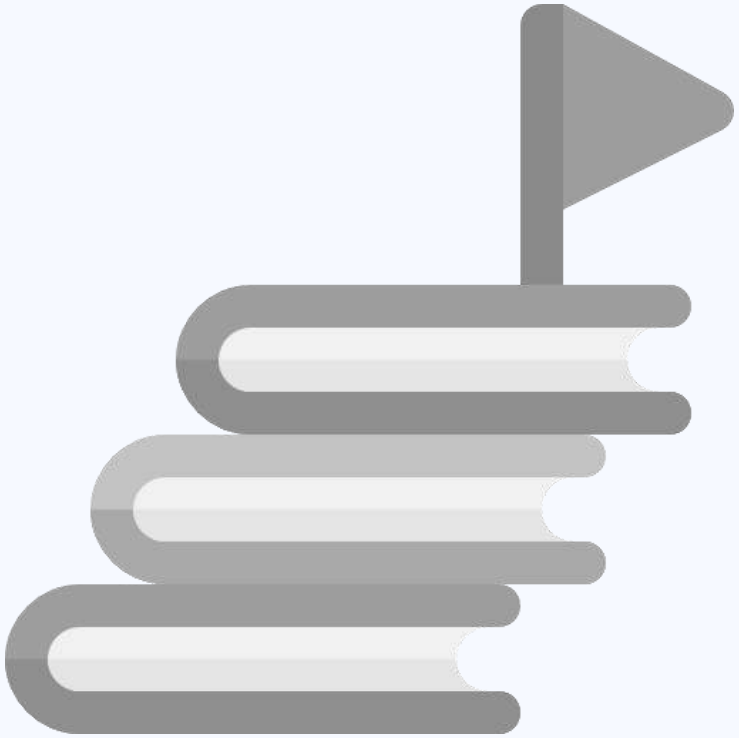
TOPICS

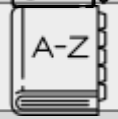
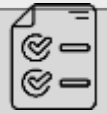
- Topic 1: Climate Change: the biggest health threat
- Topic 2: Natural Catastrophes
- Topic 3: European/International Agreements to fight climate change
- Topic 4: Examples of good practices

LEARNING GOALS

- To understand how climate change can impact human health
- To know how noise pollution can impact human health
- To distinguish the difference between climate change, global warming and weather
- To understand how natural disasters are related to climate change
- To outline the EU and International Agreements
- To know the idea behind these agreements and why they should be implemented nationally and internationally
- To differentiate what factors can shape and support more sustainable choices
- To know different good practices related to climate action
- To understand how different fields can be affected by climate change



KEY SYMBOLS

Symbols	Explanation
	Definitions
	Case study
	Additional Resources
	Tips
	Activities
	Reminder
	Video

1. CLIMATE CHANGE: THE BIGGEST HEALTH THREAT

1.1. WHAT IS CLIMATE CHANGE?

- Long-term changes in temperature and weather patterns. These changes might be due to natural causes, such as changes in the solar cycle. However, human activities have been the primary cause of climate change since the 1800s, mainly due to the burning of fossil fuels such as coal, oil, and gas.

- Watch the video below to learn more:

https://www.youtube.com/embed/G4H1N_yXBiA?feature=oembed

1.2. WEATHER EXTREMES AND THEIR IMPACT ON HUMAN HEALTH

Temperature Extremes:

- ***Heatwaves***

  A prolonged period of abnormally hot weather.

  Lead to heat cramps, body dehydration, heat exhaustion, heatstroke and even to deaths.

- ***Extreme cold***

  Can be caused by climate change and global warming

  Can create cardiovascular stress as the body tries to maintain heat, as well as diseases such as hypothermia.

1.2. WEATHER EXTREMES AND THEIR IMPACT ON HUMAN HEALTH

Floods and Storms

The health impacts include:

- Injuries after storms;
- Cases of infectious and parasitic diseases, such as gastrointestinal illnesses, respiratory infections, and skin or soft tissue infections, after storms and floods;
- Cardiopulmonary (floods) and skin complaints (storms and floods)

1.2. WEATHER EXTREMES AND THEIR IMPACT ON HUMAN HEALTH

Wildfires

- Respiratory health outcomes (asthma) due to the chemicals and gases emitted by wildfire smoke.

- <u>Other wildfire-related health impacts:</u>

Burns, injuries, mental health diseases, and death (due to exposure to flames or radiant heat).

1.3. MENTAL HEALTH

How is mental health affected by extreme events and disasters?

- The loss of homes, companies, and communities might increase financial stresses

1.4. FOOD-, WATER- AND VECTOR-BORNE DISEASES

Extreme temperature and precipitation play a major role in the transmission of diseases.

The ways, through which climate change can affect food-, water- and vector-borne diseases:

- through extreme events (floods and sea-level rise), water can be contaminated due to the presence in the environment of fecal-oral pathogens; and
- through climatic factors (temperature and humidity) that influence the survival and multiplication of pathogens

1.5. AIR POLLUTION

Lung cancer, heart disease, and respiratory infections are all at increased risk because of air pollution. Health effects have been linked to both short- and long-term exposure to air pollution.

- Watch the video below from WHO to learn how air pollution impacts human body:

https://www.youtube.com/watch?v=GVBeY1jSG9Y

1.6. NOISE POLLUTION

The most common health issues caused to humans from constant levels of noise are:

- Hearing loss
- Stress
- High blood pressure

Sound is measured in decibels and any sounds that exceed 85 decibels can harm a person's ears.

For example:

- Rock concerts (110 to 120 decibels) and
- subway trains (90 to 115 decibels exceed this threshold.

2. NATURAL CATASTROPHES

Natural disasters:

- **Floods** (When water overflows or soaks land that is normally dry)

  After wildfires, floods are the natural disaster with the greatest global impact.

  Due to global warming the total precipitation increases, putting a high risk of flooding.

- **Droughts** (A prolonged period of deficient rainfall relative to the region's average is referred to as a drought)

  They are a natural part of the climate cycle.

  However, due to climate change and the warmer Earth’s atmosphere, droughts are occurring more often the last 20 years.

2. NATURAL CATASTROPHES

Natural disasters:

- **Droughts**

Watch the following short introductory video about droughts:

https://www.youtube.com/watch?v=gv66U4tnO3M

2. NATURAL CATASTROPHES

Natural disasters:

- **Wildfires and Droughts**

Wildfires can be exacerbated by droughts.

The potential of wildfires to swiftly expand and destroy vital habitat is one of their most hazardous characteristics.

Burned plastics and other non-natural materials during wildfires, resulting in toxic run-off that can pollute bodies of water.

Fire and Rescue NSW team give water to a koala as they rescue it from fire in Jacky Bulbin Flat, New South Wales, Australia, Nov. 21, 2019 in this picture obtained from social media.

Source: https://www.voanews.com/a/east-asia-pacific_koalas-suffer-aus

3. EUROPEAN/INTERNATIONAL AGREEMENTS TO FIGHT CLIMATE CHANGE

United Nations Framework Convention on Climate Change

It was established on March 21st, 1994,

Its goal is to create a global environmental convention and stabilize atmospheric greenhouse gas concentrations to a level that will protect the climate system from detrimental human influence.

Watch the following video about UNFCCC:

https://www.youtube.com/embed/CRt3T_VPcKA?feature=oembed

Kyoto Protocol

It is a global agreement

It imposes strict limitations on greenhouse gas emissions.

It was formally adopted on the 11th of December 1997

Goal: Industrialized nations and economies in transition to set and achieve individual emission reduction targets for greenhouse gases (GHG).

Watch the following video about Kyoto Protocol:

https://www.youtube.com/embed/DFhuNKNDrLg?feature=oembed

Paris Agreement

It was adopted at the Paris climate conference (COP21) in 2015.

It is a legally binding international treaty on climate change

Goal: - to set out a global framework with the aim to keep global warming below 2 degrees Celsius, ideally below 1.5°C, compared to pre-industrial levels and,

- to reach climate neutrality before the end of the century.

Watch the following video about Paris Agreement:

https://www.youtube.com/watch?v=WiGD0OgK2ug&feature=emb_title

EU Green Deal

European Green Deal is a set of policy initiatives by the European Commission

Goals:

- to make Europe climate neutral by 2050
- to increase peoples' wellbeing
- to leave no one behind
- to reduce the emissions from cars by 55% by 2030

Watch the following video about the EU Green Deal:

https://www.youtube.com/embed/H37grur6HaU?feature=oembed

4. EXAMPLES OF GOOD PRACTICES

Companies combating climate change

Alphabet	Beyond Meat	HP	Microsoft
• the first to match its entire power usage with renewable energy, • achieved carbon neutrality in 2007	• produces 90% less GHG emissions • Uses 46% less energy, • has >99% less of an impact on water scarcity, and 93% less of an impact on land use (compared to a kg beef)	• stopped using plastic bags and power cord ties in its packaging in 2019 • aims to eliminate 75% of its single-use plastic packaging by 2025.	• by 2025 aims to use only renewable energy, • by 2030 aims to be carbon negative • working on the AI development to adopt sustainability measures that reduce the detrimental environmental effects of farming.

4. EXAMPLES OF GOOD PRACTICES

Innovation

The Plastic Road concept:

- aims to reduce the amount of plastic waste in the environment.
- will have a lesser ecological impact.

When the components are no longer useful, they can be recycled once more, which promotes a circular economy and a cleaner environment.

Watch the following video of a road made out of plastic:

https://www.youtube.com/embed/QBZN2UAfvwY?start=3&feature=oembed

4. EXAMPLES OF GOOD PRACTICES

Examples and tips on climate actions

 **Energy**	 **Transport**	 **Food**	 **Food waste**
• Reduce the heating and cooling, • use energy-efficient electric appliances • wash your clothes in cold water, and • hang up your clothes to dry rather than using a dryer.	• Drive less, walk and ride a bike more! • For longer distances, use public transportation or carpooling.	• Eat more vegetables, whole grains, legumes, nuts and seeds. • Vegetables require less energy, water and land to be produced • Vegetarian diet can reduce greenhouse gas emissions.	• It is important to buy what you need and consume what you buy! • Methane, a potent greenhouse gas, is produced when food rots in a landfill.

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