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SDG 15. LIFE IN LAND ECOSYSTEMS



VIDA DE ECOSISTEMAS TERRESTRES

- Protect, restore, and promote the sustainable use of land ecosystems.
- · Make sustainable use of forests.
- · Combat desertification.
- Stop and reverse soil degradation and biodiversity loss.

Forests cover almost 31% of the surface area of planet Earth. From the air that we breathe, the water we drink and the food we eat, the forests keep us alive. That is something we ought to remember. Around 1.6 million people depend on forests for their livelihoods. Forests are home to more than 80% of all terrestrial animals, plants, and insects.

To put this subject in context, we recommend you watch these videos:

1.1 THE CONSEQUENCES OF BIODIVERSITY LOSS

Now, more than ever, we need to think long and hard about the impact of human activity on the natural environment and the consequences of over exploitation of resources and environmental degradation, which are interfering with the fragile balance that allows the different animals and plants that live here to live in harmony.

Climate change and human activity are throwing ecosystems out of balance leading to biodiversity loss, all of which is causing natural disasters.

Deforestation and forest degradation are robbing all species of their natural habitats as are the lack of fresh water, worsening soil erosion and degradation and increasing carbon emissions into the atmosphere.

Our abuse of natural resources, excessive pollution, the consequences of a lineal economy, are causing a gradual loss of ecosystems, and our failure to take measures to protect our forests is affecting the health of the planet and harming our communities.



SUGGESTED ACTIVITY

Let's learn about the main consequences of diversity loss and forest depletion: **deforestation**, **arid soil** and diversity loss caused by **excess pollutants and pesticides**.

- Show the following videos to put the subject in context and illustrate the consequences of forest loss.
- Organise a classroom discussion to share positions and ideas on the different issues, until you have defined the purpose of your awareness campaign.
- Write your conclusions on the board and come up with a slogan for your awareness poster.

1. VIDEO TO PUT THE SUBJECT IN CONTEXT: WE ADDRESS THE PROBLEM

2. VIDEOS: LET'S LEARN MORE ABOUT THE CAUSES AND CONSEQUENCES

A. DEFORESTATION

A healthy forest controls the local climate, houses great biological wealth, and supplies water to many of the living organisms that depend on the forest for their survival.

Deforestation caused by logging trees or forest plants used for human activities.

Among the many causes are clearing land for growing crops, livestock husbandry and the spread of cities, industrial and commercial building, as well as the demand for wood products for construction, paper, and furniture manufacturing.

The main problems caused by deforestation are air and water pollution, climate change, and, last but not least, biodiversity loss.



B. ARID SOIL

Deforestation leads to poor soil quality after trees have been felled. This is because without the trees and plants that cover and protect the earth, the soil becomes arid and this desert soil loses its existing nutrients.

The absence of roots also causes soil erosion, because not only does rains wash away the soil in the form of mud, but also the nutrients and seeds it contains.



Soil degradation caused by deforestation, over farming and poor waste and landfill management reduces productivity in all land areas, and rising temperatures due to climate change are leading to an increase in the spread of semi-arid climates.

C. BIODIVERSITY LOSS

Fertilisers, pesticides, plastics, and the agricultural and environmental waste we discard and the fossil fuels we burn, are all factors that contribute to diversity loss. Agricultural, livestock, industrial and urban activities contribute to air, water and soil pollution and have a direct impact on ecosystems.

Because of biodiversity loss, animals have no option but to adapt to their changing environment. This process seriously changes the organism of animals and interferes with the food chain of many species.



<u>Image source</u>

COVID-19 IS AN ENVIRONMENTAL WAKE-UP CALL

In <u>its report "World Livestock 2013: A panorama of changing diseases"</u>, the United Nations warns that **70**% **of the new diseases that have appeared in recent years are of animal origin, derived from them crossing from animals to humans.**

This is known as <u>zoonoses</u>, which is a process by which animal diseases are transmitted to humans. Scientists point to <u>environmental degradation</u>, together with <u>overexploitation of resources and loss of biodiversity</u>, as factors accelerating this crisis. Even before Covid-19, <u>there had been to several pandemics in the last century such as mad cow disease</u>, swine and bird flu.

1.2 SDG 15 GOALS TO COMPLY WITH THE AGENDA 2030

On 25 September 2015, the UN General Assembly adopted an action plan called **Agenda 2030 for Sustainable Development**, to improve the sustainability of people and the planet.

The Agenda sets 17 targets with 169 integrated and indivisible goals covering the economic, social, and environmental spheres.

LEARN ABOUT THE SDG 15 GOALS AND HELP TO ACHIEVE THEM

Target 15.1: By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements.

Target 15.2: By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally.

Target 15.3: By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought, and floods, and strive to achieve a land degradation-neutral world.

Target 15.4: By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development.

Target 15.5: Take urgent and significant measures to reduce degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect threatened species and prevent extinction.

Target 15.6: Promote fair and equitable sharing of the benefits arising from the utilization of genetic resources and promote appropriate access to such resources, as internationally agreed.

Target 15.7: Take urgent measures to end hunting poaching and trafficking of protected species of flora and wildlife and address illegal demand and supply of wild products.

Target 15.8: By 2020, introduce measures to prevent the introduction and significantly reduce the impact of invasive alien species on land and water ecosystems and control or eradicate the priority species.

Target 15.9: By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts.

Target 15.a: Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems.

Target 15.b: Mobilize significant resources from all sources and at all levels to finance sustainable forest management and provide adequate incentives to developing countries to advance such management, including for conservation and reforestation.

Target 15.c: Enhance global support for efforts to combat poaching and trafficking of protected species, including by increasing the capacity of local communities to pursue sustainable livelihood opportunities

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WHICH ORGANISATIONS CARE FOR OUR FORESTS?

According to <u>FAO</u> (Food and Agriculture Organization of the United Nations), forests must be preserved and maintained through **forest policies and strategies** that ensure sustainability.

In this regard, <u>the United Nations</u> lays the foundation for national forest policies to be aligned with their strategies.

In addition, FAO currently has the **Strategic Plan for Forests 2017-30**, which serves **as a global framework for action** at all levels for **the sustainable management** of all types of forests and trees outside forests, **and to end deforestation and forest degradation**.

2.1 WHAT ARE FOREST POLICIES?

The purpose of forest policies is to guide and establish decisions on the sustainable use and conservation of forest and tree resources for the benefit of society.

In particular, a forest policy:

- Establishes a long-term vision that ensures the protection, maintenance, and improvement of the values of forests for present and future generations.
- It provides a strategy to address emerging problems such as climate change and to respond to new opportunities such as the "regreening" of the economy.
- It helps to balance the demands of different users and define the roles of all forestry stakeholders, from those responsible for forest management to the government body responsible for forests.
- It provides a framework for institutions, including the laws and regulations that are subsequently developed at the national level.

2.2 FOREST POLICIES IN SPAIN

Spain has had several forest and environmental policies for years, the main purpose of which is to periodically monitor **the forest mass, the condition of the soil** and **biodiversity** in Spain.

- The <u>National Forest Inventory</u> is the responsibility of the <u>Ministry of Agriculture</u> and provides regular information on the situation of Spanish forests, assesses their ownership and protection system and the legal status of the forests, studying the evolution and production capacity of all kinds of forest assets on the country's mountains.
- The <u>Spanish Inventory of Natural Heritage and Biodiversity</u> supervised by the Ministry of the Environment. In 2001, State Erosion Maps were updated with accurate information with which to prioritise regional and national investment. The <u>"National Soil Erosion Inventory"</u> monitors soils conditions to take measures to prevent soil impoverishment.

The main purpose of these forest policies is to be a source of objective, reliable and comparable information at the state level to:

Develop conservation, management, and sustainable use policies.

Raise society's awareness of the values of Natural Heritage and Biodiversity.

Serve as a source of information to meet the reporting requirements of international commitments.

Spain's **forest ecosystems** occupy just over **twenty-six million hectares**, of which almost fifteen million are forested and about twelve unforested, which account respectively for 29% and 23% of the national territory.

Spain is the European country with the most biodiversity. It has 121 different types of habitat and is home to 50% of the animal species and 80% of the plants that make their home in the European Union.

Forest policy makers need to take more notice of the impact of forests and forest management and consider their reliance on other sectors, and vice versa.

A forest policy can provide a framework for sustainable **forest management that balances the economic, social, and environmental objectives of stakeholders and society.**

SUSTAINABLE FORESTS



3.1 WHAT ARE SUSTAINABLE FORESTS?

For a forest to be considered a <u>sustainable forest</u> it must be managed in alignment with <u>economic</u>, <u>social and environmental sustainability criteria</u>. Consumers are also responsible for contributing to the efficacy of this management.

- **Economic criteria:** There is a need for an economic interest to conserve the forest environment. When this does not exist, the area may be abandoned by the local population and degraded.
- **Social criteria:** Exploiting the forest makes it possible for people to settle in the rural area, which encourages care for its ecosystems.
- **Environmental criteria:** Sustainable forest management allows nature to regenerate and conserve resources indefinitely. It helps to maintain biodiversity and reduce greenhouse gases, controls water and protects soils.

Wood has an essential role in ensuring sustainability and responsibility. It is a raw material whose **proper management** is essential to **forests and biodiversity conservation all over the planet**.

Part of this commitment entails ensuring **that wood** and wood products like **cellulose**, have a guarantee that **certifies the sustainable management of the forests** from which they originate.

In order to comply with this requirement, these goods must be certified by **ECODES** (the Ecology and Development Foundation) as well as **FSC**, **PEFC o Madera Justa** certificates for wood products and the Ecolabel that certifies them at European level.

SUGGESTED ACTIVITY



Ask your students to do some research into where the FSC label is found. This label certifies the origin of the cellulose with which several everyday products are made such as **tetra brik packaging**, **purchase receipts**, **brochures**, **notebooks**, **drinks labels**, **packaging**, **etc**.

The task involves them bringing products, objects and packaging into class which have the label, or which mention sustainable forest management. If you want to do more research into this subject, a list of the other sustainable wood seals and certifications is available in Unit 2, category B.

Once you have gathered them all, have a brief discussion in the classroom to raise awareness of the volumes of cellulose, wood and paper needed for mass production of these commonplace single-use products, and to underline the importance of ensuring the sustainability of forests.



FSC is a global, non-profit organisation that promotes responsible forest management around the world. The Forest Stewardship Council® (FSC) issues three different types of certificates: Forest Certification, Chain of Custody and Controlled Wood. The different types of certificates relate to the different stages of production and where the forest product is located in its production/distribution chain.

3.2 CONSUMER RESPONSIBILITY

Certified forest products (wood, paper, cork, mushrooms, resins, essences...) **are a guarantee for consumers that they are buying products from sustainably managed forests.** Buyers can help combat illegal logging and encourage the main functions that preserve forest resources to:

Help to maintain numerous ecosystems and protect biodiversity.

Safeguard the livelihood of rural populations and the origin of a particularly important processing industry.

To have an increasingly recognised social and cultural role.

Demanding, responsible consumers care about the sustainability of the goods they buy and require information about business practices and proof of the supplier's **commitment to the environment**.

At the economic level, more and more companies are involving their suppliers in their commitment to the environment, selecting them in accordance with these requirements to ensure that their goods **come from sustainable forests**.



SUGGESTED ACTIVITY

Show this animated story in the classroom. It features a girl who has a responsible, sustainable attitude.

The video shows daily actions such as the energy used in the home, on the way to school, afternoon tea, leisure, and library, etc. all of which are sustainable.

- Divide the whiteboard into two areas for writing.
- Ask your students about the things that the girl does in the video. Write them on a part of the board.
- Ask them if they also do these things. White X next to the things that the students do.
- Have a class discussion to define sustainable consumer guidelines, which will help you define the message of the awareness campaign.

4 WEBOGRAPHY



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