



LIFE20 PRE/IT/000007

EDUCATIONAL MATERIAL

Let's talk about desertification



This project has received funding from the European Union's LIFE 2020 Program for the Environment and Climate Action under grant agreement No LIFE20 PRE/IT/000007
<https://www.newlife4drylands.eu/en/about/>

These educational activities were developed the framework of the NewLIFE4Drylands project, with the aim of supporting teachers in explaining to their students what desertification is, and empowering them and their communities to take proactive measures to prevent and mitigate desertification.

Main goal

NewLife4Drylands aims to provide, by using Remote Sensing techniques, a framework and a protocol for identifying sustainable solutions that could be successfully implemented in degraded lands and define mid- and long-term monitoring of interventions in desertified lands, to better evaluate restoration effectiveness and improve sustainable soil management.

Areas

The areas where the project focuses are located in arid and semi-arid Mediterranean areas and in coastal ecosystems threatened by climate change. In Spain the study areas are El Bruc (Catalonia) and Tifaracás (Canary Islands), in Italy Alta Murgia (Apulia) and Palo Laziale, and in Greece the Asterousia Mountains and the Nestos Delta.





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Nestos Delta



Asterousia Mountains



Activity 1

From Asterousia to the Nestos Delta



One might easily think there is no connection between the **Asterousia Mountains** and the **Nestos Delta**?

And yet there is much that connects these two emblematic places in Greece. They are two locations with a special natural environment and rare natural beauty. But they are also two areas that emit an SOS.

In the **Asterousia Mountains** the soil is particularly degraded because of erosion. The long dry season and the high rate of evapotranspiration favour desertification due to water scarcity and drought. In the **Nestos Delta**, the temporary ponds, that is the small ponds flooded with fresh water in winter, and the remaining riparian forest are threatened by the expansion of human activities and eutrophication.

There is another very important connection between the two sites: the Life **"New Life 4 Drylands"** project, in which Greece, Italy and Spain are partnering to restore degraded and deserted drylands.



Did you know that:

The **El Bruc** region in Catalonia, **Spain** burned in 1986 and in 2015, and is continuously degraded by soil erosion and land abandonment. So, in this area a restoration project was implemented using a new planting technology called "Cocoon". The Cocoon is a kind of water container made of recycled paper pulp in the shape of a doughnut that "hugs" the young plant and supplies water to the soil, making sure that the seedlings remain hydrated in the dry conditions to improve their survival.



Did you know that:

Palo Laziale in **Italy** is a 50-hectare area that has been severely degraded due to climate change and unsustainable logging. It includes a forest of oak trees, temporary ponds, grasslands and Mediterranean shrubland.



Did you know that:



Today the European Commission approved **171 new projects** across Europe under the **LIFE Environment and Climate Action Programme** with a total budget **exceeding €396 million**. Projects from almost all EU countries will benefit from EU support under the following sub-programmes: **nature and biodiversity,**

circular economy and quality of life, climate change mitigation and adaptation, and clean energy transition. LIFE projects contribute to achieving the wide range of objectives of the European Green Deal on climate, energy and the environment, including the EU's goal of becoming climate neutral by 2050. They support biodiversity and nature restoration, improve the quality of life of Europeans by reducing pollutants and greenhouse gas emissions, increase economic circularity and resilience to climate change, and accelerate the transition to clean energy across Europe.





Implementation of the Activity

The teacher informs the students about the objectives of this LIFE project and from there tries to approach the issue of desertification.

By using remote sensing applications, the **"New life4 Drylands"** project aims to provide a framework and protocol for:

- Identifying the characteristics of desertification.
- Identifying sustainable solutions that could be successfully implemented in degraded and dry lands.

Students are divided into groups and after choosing 2 areas where the project is implemented (one from Greece and one from Spain or Italy) they research and propose solutions to address desertification.

- They contact scientific bodies and NGOs to collect information on the issue.
- They contact other schools and exchange information and experiences.
- They create a questionnaire about desertification and address their peers and the local community.
- They investigate how desertification interconnects with climate change.
- They announce the results and conclusions to the school and the local community.
- They discuss actions they can develop regarding erosion and desertification in their area.
- They create an Ecocode.
- They create a video.



Ideas for expansion of the activity

- Role-playing game.
- Information and discussion about various LIFE projects. How much have they helped and influenced the development of science and contributed to the improvement of our lives?
- Creating a network of schools working on the issue of desertification.



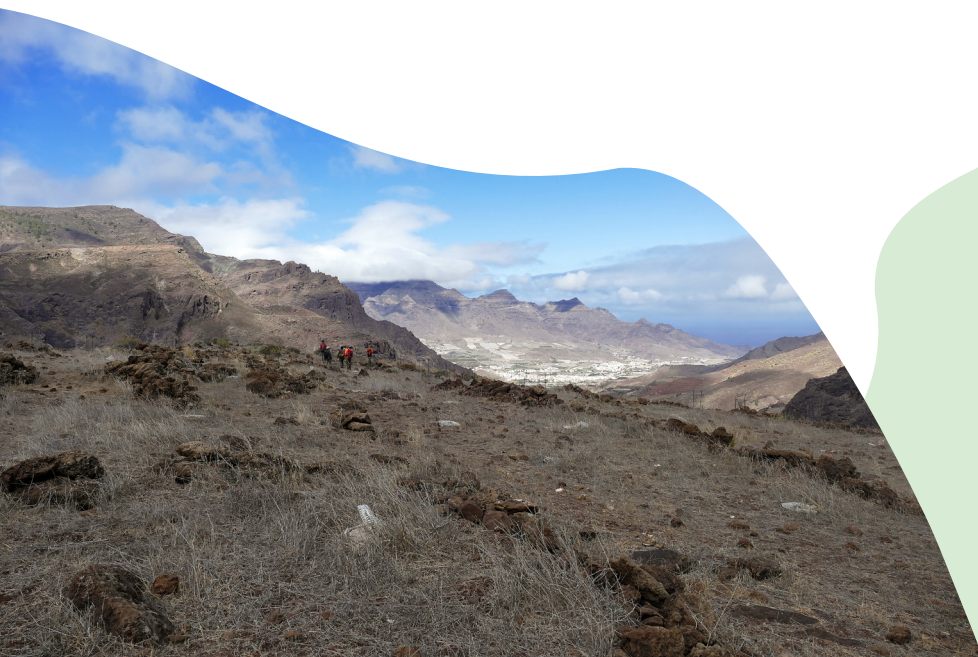
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2nd activity

Approaching desertification through literature



"Hush, teacher," he cried. Hush, teacher, let us hear the bird!" A phrase from Nikos Kazantzakis' book "Report to Greco" that has left a lasting impression on us for its catalytic pedagogical importance and its environmental significance. In the bustling city, drowning in noise and exhaust fumes, we have forgotten the sounds of the forest, of running water, the smell of the earth after the rain...

Hush teacher, let us listen to the poets, the creators.

This activity aims to approach the issue of desertification through literature, to open creative paths for students, to raise awareness and make them creators too.

Implementation of the activity



The teacher reads extracts from the book by Nikos Xenios "Allotekoiti - Where vegetation was lost" (Kritiki, 2023). It is the first stimulus, the first encounter with an author who tries to awaken and motivate us.

"He would go out and talk publicly about the great river that once ran through the plain like a coiled snake. He spoke about evapotranspiration and the heatwave in Guva, of desertification and degradation of the lands, of the loss of organic matter; he said that the river that once poured cool water into the Goulasar Falls had become a dry bed with small quantities of water in small puddles - a long rivulet, so to speak.

From time to time, he spoke of the cyanobacteria and toxic dinoflagellates that brought upon people diarrhea, poisoning and death; he spoke of the zooxanthellae, the degradation of the river bottom, of the reeds, devil's thorn and broadleaved trees that disappeared, of the encroaching salinization; and he told stories that could be true and false at the same time. For he knew very well that fairy tales and paradoxical accounts of demonic presences were just the thing to make the comfortable uncomfortable."

After reading the text there is a discussion and the teacher uses all the data he/she has such. As an example, **Lambrini Gleridou*** states: "The author, with his work loudly sounds the alarm about the danger arising from the overexploitation and destruction of the natural environment and the climate crisis, while indirectly denouncing the passivity of modern man towards the situation and the inaction of governments or their inability to take effective and drastic measures to cultivate environmental awareness and ensure the protection of nature, which we need so much in order to survive".

* * Lambrini Gleridou holds a degree in Classics (AUTH), with postgraduate studies in Creative Writing (EAP), and works in Secondary Education.



The students are divided into groups and discuss the content and the themes that the author explores in his novel.

- They get in touch with the author and invite him to their school.
- They discuss with him the overexploitation and destruction of the natural environment, desertification, and the climate crisis.
- They contact authors of similar works.
- They investigate how desertification affects literature.
- They announce their findings to the school and the local community.
- They publish relevant texts in the school newspaper.
- They organise a literary evening where they read relevant texts



Ideas for expansion of the activity

- They perform adaptations of relevant texts.
- They organise a literary competition in the school about desertification and environmental issues.
- They create a podcast.



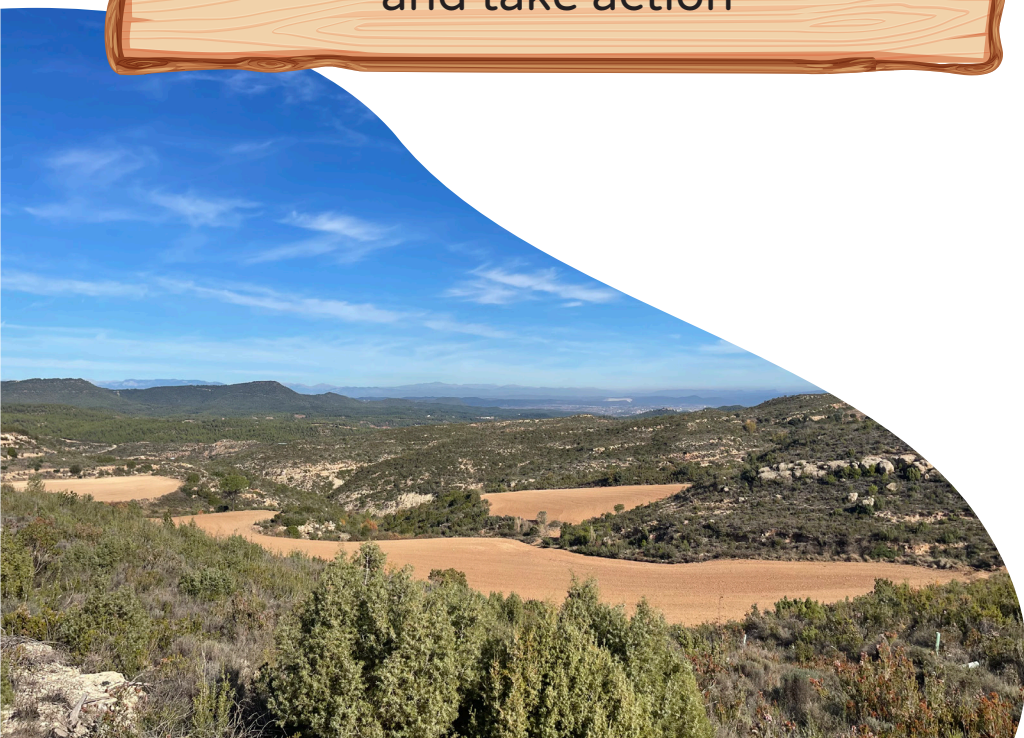
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Activity 3

Become aware of desertification and take action



In recent years, the global community has taken initiatives to protect the planet from the climate crisis and to address specific issues such as desertification. In 1996 Greece signed the UN Convention to Combat Desertification. In November 2023, a meeting of all the signatories of the Convention to Combat Desertification was held in Samarkand, Uzbekistan, to review the progress made and whether the Convention needed to be revised, in order to accelerate the measures necessary to achieve the **Land Degradation Neutrality targets by 2030**.

Did you know that:

In 1996, the «**National Committee for Combating Desertification**» was established. Among its activities and achievements is the preparation of the «**Greek National Plan against Desertification**».

Did you know that:

17 June has been declared by the UN as World Day to Combat Desertification and Drought.

UN Secretary General, Antonio Guterres, in his message on June 17, 2024 said among others: «Droughts in all regions of the world are becoming more frequent and severe... By the middle of the century three quarters of the global population may be living with drought. Climate change bears a big responsibility but so does the way we manage our land...»

Did you know that:

Desertification, the degradation of land due to drought and human activities, is a growing threat in Southern Europe. Increased temperatures, reduced rainfall, deforestation and overgrazing threaten to turn barren formerly fertile land, affecting our ecosystem, health, economy and social structures. The Mediterranean region, including Greece, Italy and Spain, is at significant risk as temperatures are rising up to twice as fast than the global average.

Implementation of the Activity

The teacher tries to approach the issue of desertification by informing the students about the available data. Valuable tools in this approach are documents from international organisations, scientific articles, interviews etc. Then the students:

- Contact scientific institutions and NGOs to collect information on the issue.
- Contact other schools and exchange information and experiences.
- Contact local administration authorities to discuss actions they can develop on the issue of erosion and desertification in their area.
- Take action to inform the local community (through posters, videos, interviews).
- To celebrate the World Day for Combating Desertification, they organise a week of action, in cooperation with the local community and other schools.
- Communicate their results, conclusions and recommendations to the school and the local community.

Ideas for expansion of the activity

- Creating a network of schools dealing with the issue of desertification.
- Presentation by students and teachers of related issues to the Environmental Committee of the Youth Parliament.
- Inclusion of relevant issues in the agenda of the Youth Parliament.
- Establishment of activities (e.g. a festival) involving schools and institutions in the fight against climate crisis and desertification.



Sources:

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