

# Save Our Soil

## RESTORATION OF SOILS AFFECTED BY FIRE



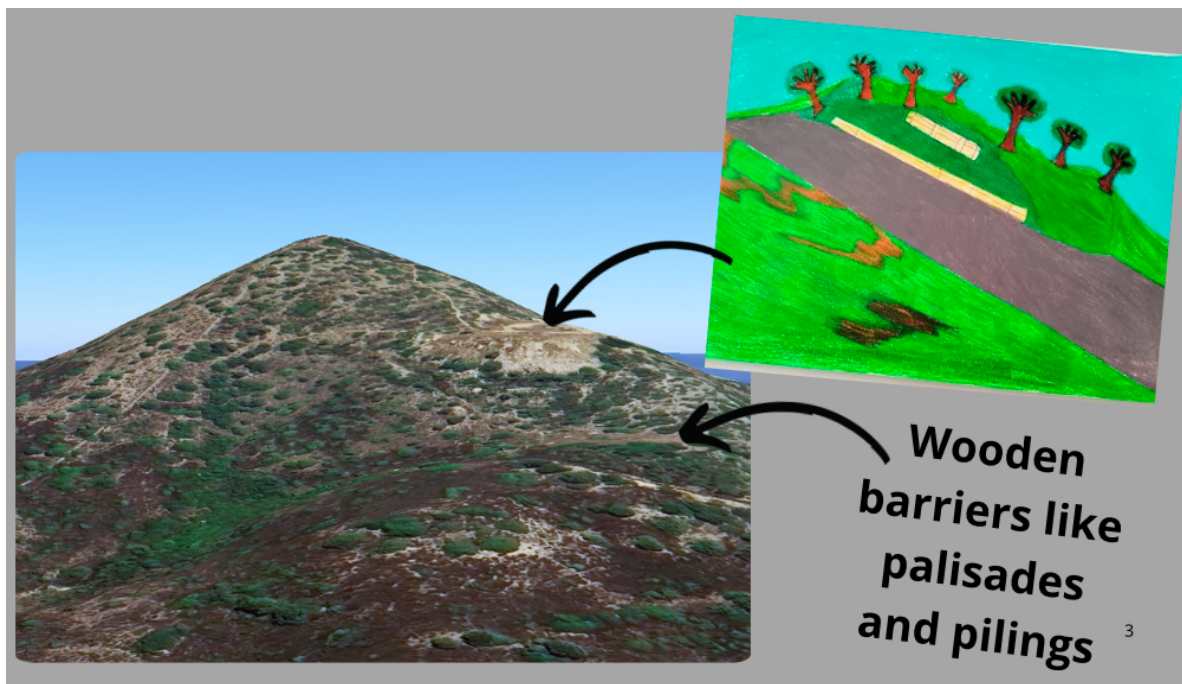
*Monte Longu areas affected by fire 2005-2023.*

The way fire pollution is managed depends on several things, such as the type and amount of materials burning, the shape of the land, the weather, and how pollution spreads through the environment. Fires release harmful gases into the air because of burning and chemical reactions caused by high temperatures. Later, these pollutants settle on the ground, causing more environmental problems. The damage caused by forest fires is always ecological and economic.

Mr. Farris Giancarlo, firefighter at the Siniscola station, told us about the damage caused by fires in Sardinia, referring to the arson set on 06/08/2023 in the main road SS 131, at the intersection between Posada and La Caletta (Siniscola), in the direction of Olbia.

The fire spread quickly due to the strong wind Mistral, between Monte Longu and the seaside areas of San Giovanni of Posada and La Caletta. This was the most serious fire in recent years in the entire province of Nuoro. The firefighters managed to extinguish the flames of the fire only the following morning. It was a real disaster: 700 hectares of land burned, the water treatment plant was damaged leaving 14,000 people without water for more than 24 hours; boats, houses, gardens, farms, commercial activities, and pastures were destroyed, and more than 300 sheep, horses, and other animals were killed. More than 600 people were evacuated and 3 were injured.

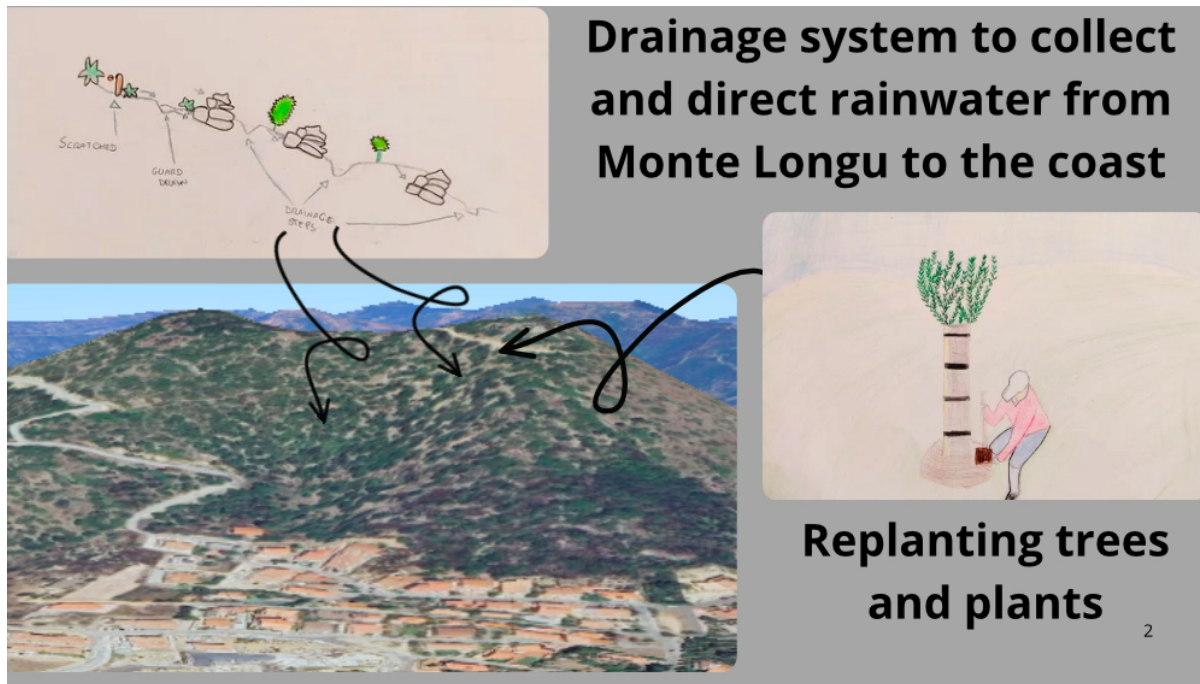
Plastic materials from vehicles, plastic items, and waste also burned, releasing chemicals in the air and other persistent contaminants into the soil, which will take many years to degrade. But it is not all, because the flames damaged buildings containing asbestos, and storage tanks such as fuel tanks, gas cylinders, barrels containing used oils and paints that polluted air and soil even more. In Italy, law 353 from 2000 on forest fires compares it to environmental damage and has severe punishments for people intentionally burning forests.



***Restoration of Monte Longu East side.***

Based on our research, we believe the following actions can help stabilize the land we've studied: building a drainage system to collect and direct rainwater from Monte Longu to the coast; replanting trees and plants; and constructing wooden barriers like palisades and pilings, and dry stone walls in key areas to prevent soil erosion.

The most effective method is the dry stone wall: walls are slanted inward to prevent collapse and are built with large rocks at the bottom, with smaller stones as you go



**Restoration of Monte Longu South side.**

up, and finer, flat stones at the top. The gaps between the stones are filled with smaller, softer rocks that help water drain through. In areas of Monte Longu already showing signs of erosion, we plan to replant native species to restore ecosystems and protect biodiversity.

**(Allegria Aurora, Farris Federico, Gungui Matilde, Piras Gabriel, Sanna Gabriele)**

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