

News from



FIRE-RES



Resilience to extreme fires in Europe

Dear reader,

Welcome to the fifth and final issue of our [newsletter](#), part of the Fire-Res project's awareness campaign.

This summer, wildfires swept across Europe with unprecedented speed and intensity, reminding us that extreme fires are no longer rare events. Driven by the advancing climate crisis, these blazes are growing in frequency, speed, and power.

The first signs that this would be an exceptional season came from far away, from Canada, when smoke crossed the Atlantic, and continued with devastating events on the Iberian Peninsula, where [record emissions](#) were not the only records broken.

In Spain, the [Segarra fire](#) in early July spread at up to 28 km/h—among the fastest ever recorded in Europe—and formed a pyro-cumulus cloud 14 kilometers high, displaying the unmistakable signature of an extreme wildfire.

[A record one million hectares](#)—twice the size of Sicily—have burned across the continent, from Ukraine to Cyprus to the UK, making it the worst wildfire season since records began in 2006.

Faced with this growing threat, Fire-Res promotes a new approach—one that goes beyond traditional fire-fighting, bringing together science, practice, and local voices to build resilient landscapes.

This begins with awareness. Through our newsletter, we have explored what an extreme wildfire is—by definition, [unpredictable and uncontrollable](#)—and examined the key forces behind it:

forests, which must be understood not as mere resources but as living systems, [and fire itself](#). Learning to coexist with fire, to make it an ally in reducing extreme events, is also an act of humility for a society used to controlling nature. [Fire-fighting too must evolve](#)—from an obsession with control to adaptive management.

Equally crucial is the [role of society](#), whose interests, choices, and participation will determine the resilience of our territories.

This new approach is only possible through a culture of prevention, built on shared responsibility.

In this issue:

We revisit a symbolic moment of awakening for Europe’s wildfire awareness—Pedrógão Grande, Portugal, 17 June 2017—and the fiery months that followed, which revealed how deeply we had entered the era of extreme wildfires

Our journey now comes to an end, together with the Fire-Res project. Yet its ideas and insights will continue to grow.

Before we close, we invite you to one final event—to discover the work achieved and look ahead to future challenges.

Save the date: On 4–5 November, Brussels will host the [Final Conference](#) of Fire-Res: *“Toward a Wildfire-Resilient Europe: From Knowledge to Policy Action.”*

Thank you for following our journey and for sharing our commitment to wildfire resilience. This may be our last newsletter, but the work of Fire-Res continues—with all who care for the future of our landscapes.



The summer Europe woke up to the era of extreme wildfires

In June 2017, a catastrophic wildfire tore through Pedrógão Grande, Portugal, killing 66 people in minutes — the country’s deadliest blaze. A rare “plume collapse” caused the fire

to explode in speed and intensity, trapping dozens as they fled. Just months later, another firestorm killed 51 more nearby. Pedrógão marked a turning point in Europe's understanding of extreme wildfires — no longer rare, now fast, unpredictable, and harder to control. Many key themes of the Fire-Res project became painfully evident: the need for better land planning, more diverse forests, the impact of rural abandonment, and the urgent need to rethink emergency response. Local communities began building more resilient landscapes, replacing eucalyptus with native trees and restoring grazing — but their efforts alone are not enough. Without integrated, long-term management, the conditions that made Pedrógão possible remain dangerously in place.

[Read the full article](#)



“Pedrógão Grande showed Europe we need a new approach to wildfires. But a real change is yet to come”

Paulo Fernandes, wildfire expert at the University of Trás-os-Montes and Alto Douro...

In 2017, the Pedrógão Grande fire was described as a turning point. How did it change risk perception?

Pedrógão wasn't the first fire of its kind in Europe: a similar event happened in France in 1949, where around 90 people died. But that was a long time ago, and people had either forgotten or assumed it couldn't happen again. Yet, especially in Greece and Portugal, other fires had already caused numerous fatalities. What was different in Pedrógão is that a single fire caused all those deaths, and everything collapsed in a matter of minutes. I think that's what made the difference. More than a "turning point," it became a benchmark: the start of a new awareness of a type of risk that could become more frequent.

What is a “plume collapse” and why is it so dangerous?

It's the phenomenon that directly caused the deaths in Pedrógão. The convective column—made up of combustion products—rose over 12 km high, forming ice and fire-generated thunderstorms, then collapsed violently back to the ground, pushing the fire in all directions. As far as we know, this had never happened before in Portugal.

In October of the same year, in the same region, other extreme fires killed 51 more people. Was it a coincidence?

Given the specific characteristics and dynamics of those fires, probably yes. But what really determines a fire are the conditions. 2017 was the driest year ever recorded in Portugal, and the drought had already begun in 2016. In October, 200,000 hectares burned in about 12 hours—something never seen before in Europe. In fact, 2017 was marked by an almost unbroken cycle of extremely fast and intense wildfires.

How much did human error and lack of awareness contribute?

In June, many fire lookout towers weren't operational yet: the one closest to the fire's origin was closed. All the conditions for an extreme fire were there—intense heat, very low humidity, strong winds, unstable atmosphere—but they were underestimated. Initially, it was thought to be a "normal" fire. This reflects poor preparation and limited awareness, even at the national level: in the early days, Lisbon considered other fires to be more serious. If the threat isn't recognized in time, decisions come too slowly and are inadequate.

How did rural abandonment and the spread of eucalyptus plantations affect things?

A great deal. In extreme weather conditions, the landscape is what makes the difference. The area is dominated by eucalyptus and pine forests, with few cultivated areas and many scattered villages—about 80 in Pedrógão—mostly inhabited by very few people, as many have migrated over the past decades. As for eucalyptus, the issue isn't just the species itself, but the way it adds another layer of fuel to already flammable native vegetation, multiplying the risk. The landscape is poorly fragmented and barely maintained, which favors the spread of fire.

Since 2017, new policies have been introduced and many studies and projects launched. What has actually changed?

Today, our knowledge of fire weather and fire behavior is much greater, partly thanks to research on those fires. Politically, Portugal created an agency for integrated fire management, with a coordination role. The national plan is among the most advanced in Europe, but remains poorly implemented. We have many more resources now, but we lack the technical expertise and knowledge to support decision-making. Fuel management is still minimal: only about 3,000 hectares are treated each year through prescribed burning, maybe a tenth of what would be needed.

What are today's priorities to prevent such tragedies from happening again?

We need an integrated approach: a single agency to handle prevention, emergency response, and recovery—like in the U.S. or Australia. In Europe, civil protection focuses on people and buildings, not the landscape. But fire is a puzzle that requires coordinated action at multiple levels: landscape design, forest management, prevention, response. Without that broader vision, everything will remain fragmented and ineffective.

Our investigations



[Cyprus: a change of mindset in wildfire prevention?is changing the fire map of Europe](#)

Mary Drosopoulos – OBCT

Wildfires pose a serious threat to the environment and the economy of Cyprus, including summer tourism. Between institutional delays and cooperation efforts between the Greek and Turkish communities, the country needs prevention and a paradigm shift



[North Macedonia: limited resources for managing natural park fires](#)

Marco Ranocchiari – OBCT

North Macedonia's protected areas are of great ecological importance, but are increasingly exposed to the risk – among others – of fire. While political fragmentation and a shortage of personnel and resources pose considerable challenges, there has been significant progress. A report from the Šar Mountains National Park



[How wildfires can worsen floods](#)

EDJNet – Openpolis

A little-known effect of wildfires is that they weaken the soil, leaving it more vulnerable to rain-related disasters. It is a vicious circle for a country like Italy, which is exposed to both.

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