

News from



FIRE-RES

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Resilience to extreme fires in Europe

Dear reader,

Welcome back to our newsletter, part of the European [Fire-Res](#) project, which explores the growing threat of extreme wildfires in Europe and beyond.

In the first issue, [we tried to clarify what characterises these types of fires—by definition, uncontrollable and unpredictable](#)—and explored how climate change is a key driver behind their growing intensity. While southern and Mediterranean countries are currently the most affected, extreme wildfires are rapidly becoming a concern for northern and eastern parts of the continent as well.

Today, we focus on the other key element of the equation: forests. Far from being merely the victims, these complex ecosystems—and their health and structure—have a profound influence on the likelihood, intensity, and consequences of wildfires.

We'll explore their ability to withstand fire and regenerate in its aftermath—a millennia-old dynamic of adaptation in which fire itself has long been one of the key forces shaping forest landscapes.

These delicate balances have largely been lost over more than a century of utilitarian forest management. First, biodiversity was reduced through widespread monoculture plantations, often with non-native species; then, large swathes of forest were simply abandoned, further increasing their vulnerability.

At the same time, a society increasingly intolerant of disturbance has improved its ability to suppress every small and medium fire—disrupting a natural mechanism that once periodically removed the most flammable material from the forest floor.

Faced with new extreme fires—against which technology alone is no longer sufficient—forests risk becoming ticking time bombs. Defusing them starts with a shift in right to complexity.

And in this complexity, fire itself should no longer be seen only as a threat, but also as a potential ally, if understood, managed, and controlled wisely.

Since our last issue, the European Commission's Joint Research Centre (JRC) has published [updated data on the 2024 summer season](#). The numbers confirm ongoing trends: more than 400,000 hectares of forest were burned across the EU, 35% of which were inside Natura 2000 protected areas. In Portugal alone, six fires exceeded 5,000 hectares each.

Just beyond the EU's borders, meanwhile, the war in Ukraine has sparked a sharp rise in fire outbreaks: over 8,000, more than the total recorded across all of Europe in 2023.

If environment, health, and society are deeply interconnected, this is especially true when it comes to wildfires, particularly the extreme ones.

The path forward may begin in the woods—where complexity, resilience, and even fire itself coexist.

Enjoy your reading.



**Understanding forests,
learning how to coexist with fire**

Decades of purely utilitarian management have made forests more vulnerable to extreme wildfires, worsening the effects of the climate crisis. First, the planting of monocultures and alien species, and then, in recent decades, their widespread abandonment, have made forests more vulnerable, filled with dead wood that is easily flammable.

Paradoxically, the same efficiency with which we have learned to control smaller fires has ended up exacerbating the risk of more devastating ones.

In the face of this threat, a radical shift is needed, one that involves a real understanding of forests, valuing their diversity, and placing greater emphasis on their resilience. There must be strong attention to planning, which must be carefully calibrated on a case-by-case basis. Sometimes, the change may be so significant that it challenges a taboo: the idea of coexisting with fire under certain conditions. Prescribed fires, in fact, can help remove excess combustible material more effectively than many other mechanical methods. But for this, as with more careful planning, a cultural shift is necessary, and there is still much work to be done.

[Read the full article](#)



“We need to rebuild a culture of fire”

Forest engineer with a PhD in education, **Conceição Colaço** is the Coordinator of the Agro-environmental Education Research Area at the Centre for Applied Ecology "Prof. Baeta Neves" (CEABN) - ISA School of Agriculture, University of Lisbon. For Fire-Res, she is responsible for the **Fire-Education platform**, an immersive tool for policy-makers, schools and families, to be published this spring.

Can you briefly describe what the Fire-Education platform will be?

It will be a platform collecting good practices and essential information about fire management - prevention, preparedness, detection, and emergency response - explained in simple terms, also with videos, podcasts, training courses. We're gathering the most reliable materials available worldwide, making them easily accessible, allowing people who want to know more to go directly to the sources.

It will cover five core topics based on European surveys about fire concerns, and will also include a cultural section about historical, traditional and artistic aspects of fire - such as stories, art, music and poetry. There will also be a map of fire-related festivals across Europe.

What do cultural and artistic aspects have to do with fire management?

Europe used to have a fire culture but it has largely lost it. Most people know that in rural areas fire has been used for millennia for agricultural practices - like burning the pruning leftovers and renewing pastures - but today it's mostly seen just like a threat. Yet fire is still part of our daily lives, from cooking to spiritual ceremonies. Understanding and reintegrating fire's role in society would certainly help build a shared culture of fire risk.

Do we still need fires in our forests?

In the Mediterranean areas fire is needed to renew vegetation, by burning the dry dead parts of the plants and thus enabling young plants to resprout. Technical practices like

prescribed burning can prevent wildfires by reducing fuel loads and help conservation. Still public awareness and acceptance of such practices remain a challenge.

Has improved firefighting capacity contributed to our loss of familiarity with fire?

Yes. Society's attempts to completely suppress fire have not only made us less familiar with it, but also led to what we call "fire entrapment": by extinguishing every small fire, we allow unmanaged vegetation to accumulate, which increases fuel loads and can lead to large uncontrollable wildfires.

Which sectors or areas of European society most urgently need to rediscover their fire culture?

Wherever there is a vast lack of knowledge on how to behave before, during and after fires, that gap needs to be addressed - not just for the communities involved but also for the tourists that frequent fire-prone areas. This is especially evident what we call "future fire-prone countries" - where wildfires have not been common, but due to climate change are becoming increasingly at risk. Not only is their current vegetation often not adapted to fire, but communities there are also less used and less equipped to deal with large and extreme fires. This is particularly critical in the wildland - urban interface, where people are used to think fires will stop as always did. Changes in the weather patterns will create the plant conditions to start and develop a large wildfire.

Our investigations



[Fighting fires with fires – and pasture](#)

Davide Mancini – Voxeurop

When talking about fires we typically imagine a terrifying and catastrophic event. But the use of controlled fires is once again becoming common practice in Europe: together with livestock grazing, it is looking like an essential and economical technique that can prevent genuinely catastrophic fires.

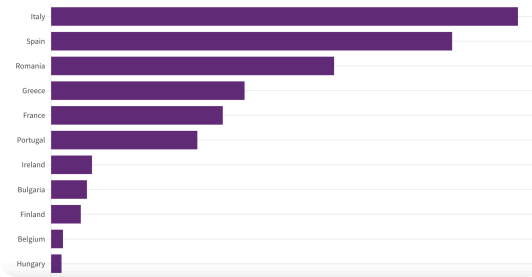


[Portugal: wildfires and the eucalyptus curse](#)

Davide Mancini – Voxeurop

Portugal is Europe's third largest producer of wood pulp, an industry that relies heavily on the eucalyptus tree. In 2017, a devastating fire ignited a debate on the industry's responsibility to prevent such disasters. In particular, the issue of biodiversity was brought back to centre stage. Reportage.

A quarter of all burned surface area in protected sites in the EU was in Italy
Hectares of Natura2000 sites burned in EU countries (2021)



[Protected areas are highly vulnerable to fire](#)

EDJNet – Openpolis

Fires destroy ecosystems, and the harm is multiplied when protected areas are involved. More than a quarter of all Natura 2000 sites burned in 2021 were located in Italy.



[Protecting forests in Bosnia and Herzegovina](#)

Video by Paolo Martino – OBCT

Woods and forests are one of the most valuable resources for Bosnia and Herzegovina. Sustainable management of this natural heritage - and the prevention of forest fires - face, however, a number of obstacles.

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