Newsletter from the Fire-Res project's awareness campaign, presented by OBCT
Issue n.3

News from FIRE-RES

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.

As summer approaches, Europe braces for a new fire season. With hotter, drier conditions becoming the norm, the risk of extreme wildfires—large, fast-moving, and impossible to fully control—is growing rapidly.

In response, the European Union is reinforcing its fire response capacity through the Civil Protection Mechanism and the expanded RescEU fleet. But while greater resources are essential, technology alone is not enough. Extreme wildfires mark a turning point—and demand a new paradigm.

As we explored in our previous issues, this shift begins with the land itself. Healthy, diverse, and actively managed forests are more resilient to fire. But change is also needed in how we handle emergencies. When fires can't be completely suppressed, what matters is how we manage them.

This requires a deeper knowledge of local landscapes—so that when a fire breaks out, responders can steer it away from the most vulnerable and flammable areas. It means recognizing and seizing strategic windows of opportunity to intervene effectively. And crucially, it calls for coordinated international action.

Yet, despite growing collaboration, many institutional and organisational divisions remain between countries—gaps that even the most advanced firefighting fleets cannot fully bridge. The path forward is clear, but it's time to follow it with determination.

Extreme wildfires are here to stay. But with better knowledge, stronger cooperation, and smarter strategies, we still have the tools to respond.

Enjoy your reading.

Fighting wildfires: the difficult shift from suppression to management

How can we defend ourselves against fires that—by definition—cannot be extinguished even with the most powerful air tankers, nor predicted with precision? Facing the threat of extreme wildfires, it is hard to resist the temptation of a purely forceful effort to fight and put out the fire at all costs. Only through a deeper understanding of wildfires, the new climatic conditions that make them possible, and their interaction with forests—including the activities of those who live there—can we effectively tackle this new threat by implementing effective prevention, timely warning systems, and strategies to "tame the fire" during emergencies.

Read the full article

“Unprecedented blazes call for a new firefighting paradigm”

Sergio Pirone has nearly 40 years of experience with the Volunteer Forest Firefighting Corps (AIB) in Italy's Piedmont region and serves as director of the Advanced Training Centre for Forest Firefighting and Civil Protection in Mountain Areas. Throughout his career, he has managed emergency responses across various EU countries. In Fire-Res, with the organization TIEMS, he focuses on training, interoperability, and command-and-control systems for first responders in extreme wildfire scenarios.

Why isn’t increasingly powerful equipment enough to fight extreme wildfires?

Today, some extreme wildfires reach flame front intensities of 50 to 80 thousand kilowatts per meter. Aircraft are important, but even the most powerful ones are ineffective in direct attack when intensity exceeds 6 to 8 thousand kilowatts per meter. Convective motions and columns of hot air affect lift and maneuverability, forcing aircraft to fly much higher, at altitudes where they are completely ineffective. In fact, the dropped water evaporates before reaching the target.

We must also remember that it’s ground crews who truly make the difference. But at such intensities, it’s impossible to ensure operator safety. Unfortunately, some are lagging behind and still focus only on acquiring aircraft with greater water-carrying capacity, without realizing that the paradigm has shifted. We have moved—or should move—from “fire control,” meaning the attempt to extinguish all fires, to an integrated system of “fire management.”

What does it mean to ‘manage’ an extreme wildfire?

Extreme wildfires may be technically unmanageable, as they exceed current suppression and operational capacities, but there’s always a margin for action. It’s essential to have a clear goal—such as protecting a specific location, a settlement, a road—and the tactics to achieve it. With planning based on local knowledge, an understanding of the phenomenon, and proper forest management, effective prevention is possible. And when the fire arrives, if we know the most vulnerable areas—those more likely to burn intensely and rapidly—we can try to prevent the fire from reaching them and keep it within limits where intervention is still feasible.

You work on interoperability among different firefighting forces and countries. What challenges are there?

Each system has its own pace of development and area of specialization. We often fail to make the most of the high-level expertise that exists in every country because they don’t communicate, and we end up duplicating efforts. Sometimes there are simple technical incompatibilities, such as hoses with different connector sizes. Replacing millions of components isn’t feasible, but we can create adapters—and we’ve done it. Modex, the joint European exercises, are useful, but the system still relies on overly standardized scenarios, which makes them unrealistic.

Can scientific and technological innovations help?

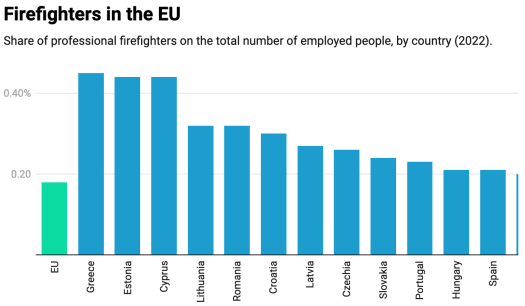
They can be very helpful, and Fire-Res proposes many innovations—from drones to improved suppression systems. Some are particularly groundbreaking, such as new types of sensors that detect when a forest is under water stress. There’s also significant progress in mapping and fuel modeling. More generally, scientific research is crucial for understanding fire behavior and the weather conditions that drive it, and for building early warning systems. But no technology alone is sufficient.

What else is needed?

By trying to extinguish every fire and treating it as an enemy to be entirely excluded from our landscapes, we’ve lost our culture of fire. Over 95% of wildfires are caused by humans

—and of these, 52% are unintentional. We need to spread awareness of wildfire risks and dynamics, and recover the ability to use fire as a tool for territorial prevention.

Our investigations



[As wildfires tend to increase, the number of firefighters decreases across Europe]

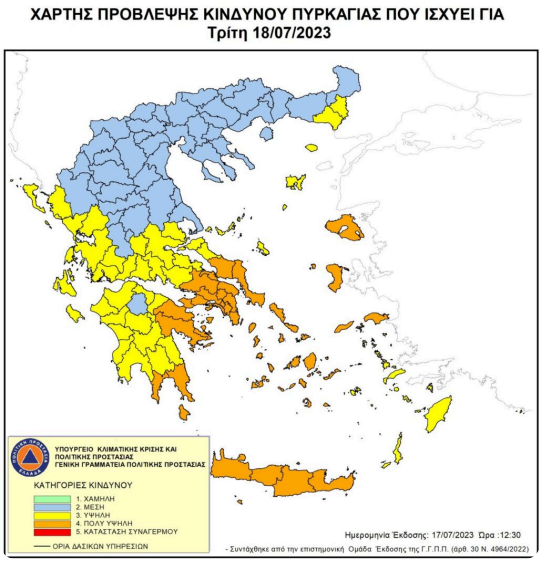
György Folk, Grzegorz Broniatowski – EUrologus, Frontstory.pl

Despite decades of targeted financial support, the differences in training and equipment across Europe make cooperation challenging and often inefficient.

[North Macedonia, the emergency response system needs changes]

Aleksandar Samardjiev - OBCT

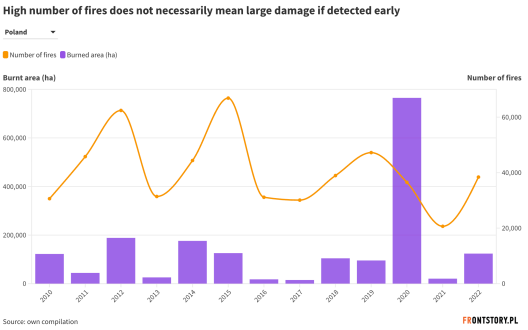
The vast fires that have hit North Macedonia in recent weeks have called into question the country's outdated system for responding to emergency situations. A problem made more serious by the lack of resources and personnel



[Greece’s map for predicting wildfires is anachronistic and inadequate]

Kostas Zafeiropoulos – MIIR

Greece's current wildfire prediction map lacks transparency and fails to account for real-time weather changes, resulting in inadequate response to rapidly evolving fire conditions.



[Is Central Europe ready for a mega-fire?]

Urszula Kifer, Grzegorz Broniatowski, Anastasiia Morozova, Davide Mancini, György Folk, Laszlo Arato – EUrologus, Frontstory.pl, Voxeurop

Large forest and grassland fires are one of the most dramatic consequences of the ongoing climate catastrophe. Year after year, media coverage of fires ravaging Canada, Australia, Greece or Portugal is increasing; rising temperatures, however, mean that the threat is growing in many areas of the world – including Central Europe.

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